



Dacorum Local Development Framework Core Strategy – Pre Submission

Sustainability Appraisal Report Appendix B: Baseline Review

September 2011

Contents

Appendix B: Current and Future State of the Environment.....	3
1 Environmental Factors	3
1.1 Air Quality.....	3
1.2 Biodiversity	5
1.3 Climatic Factors	9
1.4 Cultural Heritage.....	12
1.5 Landscape.....	15
1.6 Material Assets	20
1.7 Soil	23
1.8 Water	25
2 Social Factors	28
2.1 Human Health	28
2.2 Noise.....	31
2.3 Population.....	32
2.4 Housing	34
2.5 Crime	36
2.6 Accessibility	37
2.7 Social Deprivation	38
2.8 Recreation, Sport and Leisure.....	39
2.9 Disability Allowance.....	40
2.10 Healthcare	41
2.11 Education.....	42
3 Economic Factors	44
3.1 Economic Activity.....	44
3.2 Employment.....	47
3.3 Economic Footprint	48
3.4 Enterprise and Innovation	49
References	50

Appendix B: Current and Future State of the Environment

This appendix outlines the key issues arising from the policy context review and baseline analysis and is set out according to individual SA/SEA topics.

1 Environmental Factors

1.1 Air Quality

1.1.1 Relationship with other Plans and Programmes

On European level EU Directive 1996/62/EC on Ambient Air Quality sets the framework for dealing with local air pollution by introducing new air quality standards for previously unregulated pollutants. In addition, the 6th EU Environment Action Programme highlights strategic priorities of the Commission's environmental policy, amongst others human health - an issue closely related to air pollution. On national level, the UK Air Quality Strategy defines a number of air quality objectives for several pollutants to protect human health and to contribute to the protection of the natural environment by setting objectives for two pollutants (nitrogen and sulphur dioxide) for the protection of vegetation and ecosystems, whilst PPS23 'Planning and Pollution Control' stresses the importance of the proximity principle in siting new developments and thereby separating incompatible land uses.

1.1.2 Baseline Information

The monitoring of air quality is important in ensuring that levels of identified pollutants remain below national standards and targets to protect human health and eco systems. Identified pollutants include:

- Nitrogen oxides (NO_x);
- Nitrogen dioxide (NO₂);
- Particulate matter (PM₁₀);
- Sulphur dioxide (SO₂);
- Benzene;
- Carbon monoxide (CO); and,
- 1, 3-butadiene.

The ambient pollution concentrations, and the number of days where air pollution was moderate or high, have been collected. This data has been compared to regional data and national targets.

The pollutant levels¹ of Watford Borough, St Albans City and District, Dacorum Borough, and Three Rivers District are shown in

Table 1. The data was derived by calculating the average of for all sites in the Local Authority area. Measurements were not available for SO₂, benzene, CO and 1,3-butadiene levels in 2008. The data below displays a general trend of decreasing pollutant levels between 2001 and 2008.

¹ Air Quality Archive: <http://www.airquality.co.uk/archive/laqm/laqm.php>

Table 1: Pollutant Levels

Pollutant	Watford		St Albans		Dacorum		Three Rivers	
	2001	2008	2001	2008	2001	2008	2001	2008
NO _x	65.04	34.69	63.77	28.71	43.87	19.10	60.00	28.58
NO ₂	34.20	22.46	33.67	18.41	25.92	12.93	32.33	19.03
PM ₁₀	21.74	18.19	21.46	18.23	20.30	16.64	21.31	17.46
SO ₂	3.6	-	3.76	-	3.42	-	3.6	-
Benzene	0.72	-	0.60	-	0.46	-	0.59	-
CO	0.42	-	0.38	-	0.32	-	0.37	-
1, 3-butadiene	0.31	-	0.27	-	0.19	-	0.27	-

Units: NO_x (ugm-3 as NO₂ annual mean); NO₂ (ugm-3 annual mean); PM₁₀ (ugm-3 grav. annual mean); SO₂ (ugm-3 annual mean); Benzene (ugm-3 annual mean); CO (mgm-3 annual mean); 1, 3-butadiene (1, 3-butadiene 2001 ugm-3 annual mean).

Table 2 shows the number of days when air pollution was 'moderate' or 'high' for PM₁₀² at the local level.

Table 2: The number of days where air pollution was 'moderate' or 'high'²

Local Authority	2001	2002	2003
Watford	5	2	10
St Albans	4	4	15
Dacorum	0	4	(4)
Three Rivers	5	8	13

() = denotes sites that have a capture rate of less than 75% over the year.

Table 3 shows the number of days when air pollution was 'moderate' or 'high' in the East of England, and in England overall³. Figures for the East of England were calculated by taking an average of the sites where days were recorded (Norwich Centre, Southend-on-Sea, Thurrock, St Osyth, Sibton, Weybourne, and Wicken Fen). The number of days where air pollution was 'moderate' or 'high' in England does not include figures taken at St Osyth, Weybourne, Stockton-on-Tees Yarm, Hull Freetown, and Coventry Memorial park due to the fact that these were new sites³.

Table 3: The number of days where air pollution was 'moderate' or 'high'³

Site Name	Site Type	2002	2003
East of England	Average (Urban and Rural)	40	69
England Urban	Urban	19	51
England Rural	Rural	34	68

² Herts Link – Quality of Life Indicators

<http://www.hertslink.org/portal/Observatory/Data%20by%20Subject/Life%20in%20the%20community/Quality%20of%20Life/Quality%20of%20Life%20Indicators>

³ Regional Quality of Life Counts:

The pollutant levels in the area encompassed by Dacorum Borough Council decreased between 2001 and 2008. The levels of NO_x, NO₂, PM₁₀, SO₂ and CO in both 2001 and 2005 are below the average levels in the East of England¹, and where appropriate are below the national targets. The levels of benzene and 1, 3-butadiene were also below the national targets.

The number of days where air pollution was 'moderate' or 'high' increased between 2001 and 2002 from 0 to 4 days², and remained constant between 2002 and 2003. This level, however, is both below the average for the East of England and the average for England³.

Dacorum Borough Council have completed the 2010 Progress Report which confirms that annual mean nitrogen dioxide concentrations continue to exceed the relevant Air Quality Objectives at three locations within the Borough (Lawn Lane, Hemel Hempstead; London Road, Apsley; and High Street, Northchurch). Consultation on the declarations of AQMAs is underway (August 2010)⁴.

1.1.3 Trends

In general, pollutant levels are decreasing, and are better than the national targets. However in some areas levels of NO_x have increased. Trends in the future baseline will be dependent on whether traffic volumes increase as a result of new development within the Borough as well as how effective new vehicle technologies are at reducing emissions.

1.2 Biodiversity

1.2.1 Relationship with other Plans and Programmes

Numerous international agreements deal with the loss of biodiversity. The Ramsar, Bonn and Bern Conventions aim to protect wetlands, migratory species, wildlife and natural habitats respectively whereas the more recent Convention on Biological Diversity, the Millennium Development Goals and the World Summit on Sustainable Development stress the wider importance of biodiversity and its conservation. On European level, the Birds and Habitats Directive and the EU Biodiversity Strategy make more specific provisions which are then cascaded down into national legislation.

The Bern convention, Birds and Habitats Directive are implemented in the UK via the Wildlife and Countryside Act, whereas the national Biodiversity Action Plan (UK BAP) sets out more detailed commitments for species and habitat protection and enhancement. The Biodiversity Strategy for England aims to embed biodiversity conservations in all main sectors of public policy, while the England Forestry Strategy fosters the sustainable management and expansion of woodland areas. This is supplemented by a number of planning policy statements/guidance notes, such as PPG 2 'Green Belts', PPS 9 'Biodiversity and Geological Conservation' and MPG 6 'Aggregates Provision' which make specific provisions for biodiversity conservation in the planning system. More locally, the Hertfordshire Biodiversity Action Plan and the Dacorum Borough Nature Conservation Strategy aim to contribute to the UK BAP by setting out actions for conservation of certain species and habitats.

⁴ <http://www.hertsbedsair.org.uk/hertsbeds/reports/HBAnnualReport2009.pdf>

1.2.2 Baseline Information

Natural Areas

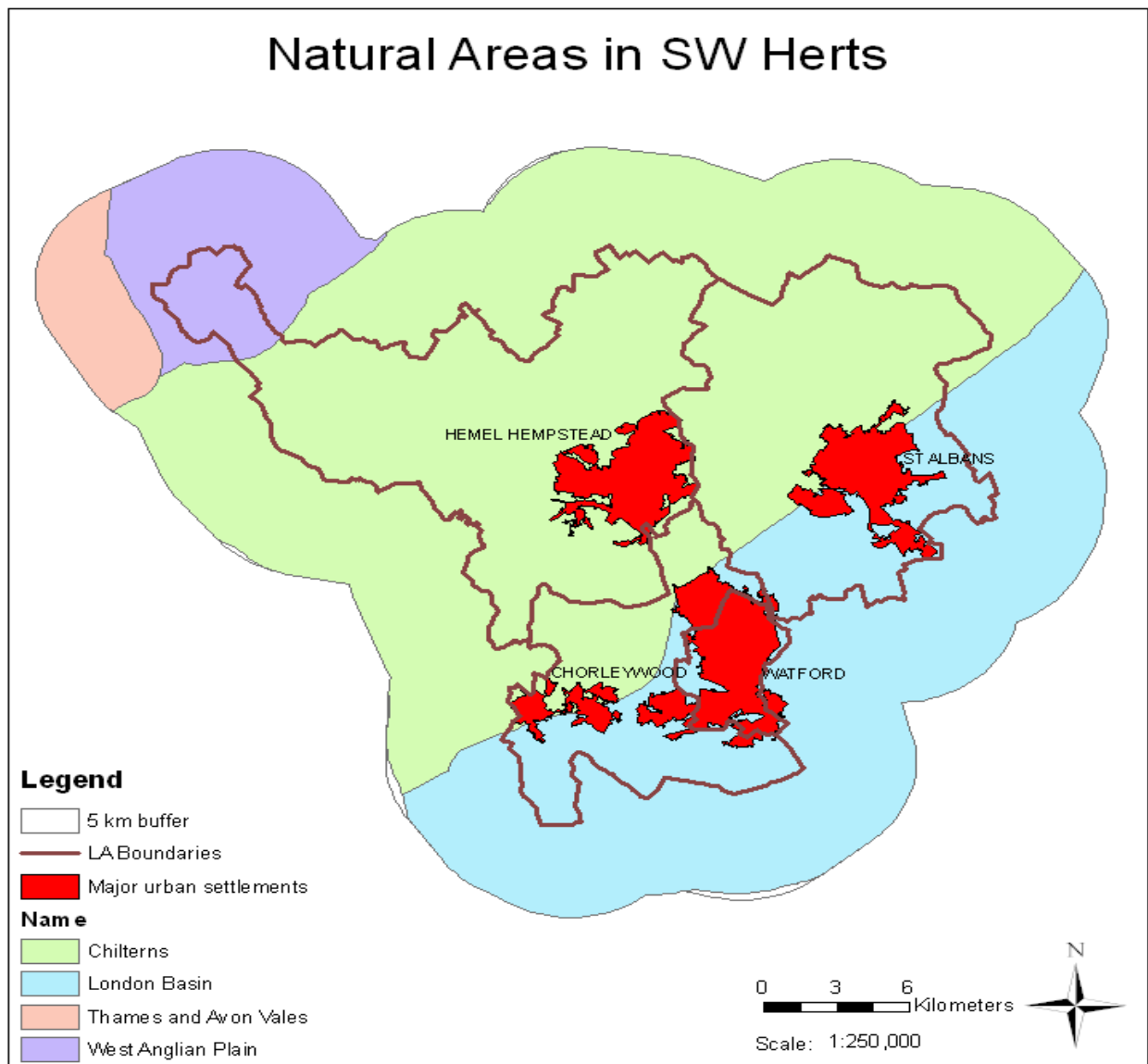


Figure 1: Natural Areas in South West Hertfordshire

Dacorum falls within Natural England’s natural areas “Chilterns” (number 65), and “West Anglian Plain” (number 52). The former covers Dacorum almost entirely as illustrated in Figure 1. Natural areas are bio-geographic zones which reflect the geological foundation, the natural systems and processes, and the wildlife within the area. They follow very similar boundaries to the landscape character areas, although natural areas are often divided into more than one character area. The natural areas provide the context in which plans such as the LDF can look to secure, strengthen and enhance the biodiversity and natural features which characterise Dacorum’s parts of the natural areas. The Natural England summary for the Chilterns natural area starts as follows⁵:

“The chalk escarpment of the Chilterns is a dominant geological and landscape feature which rises steeply from the Vale of Aylesbury to 275 metres above mean sea level. The scarp face is largely wooded in character, interspersed with areas of unimproved chalk

⁵ English Nature (1997) “Chilterns Natural Area”, available at <http://www.english-nature.org.uk/science/natural/profiles/naProfile65.pdf>

downland and scrub on thin rendzina soils, but the northern end of the scarp is more open.”

Dacorum contains a range of sites designated for their biodiversity value. These are illustrated in Figure 2 and discussed in more detail below.

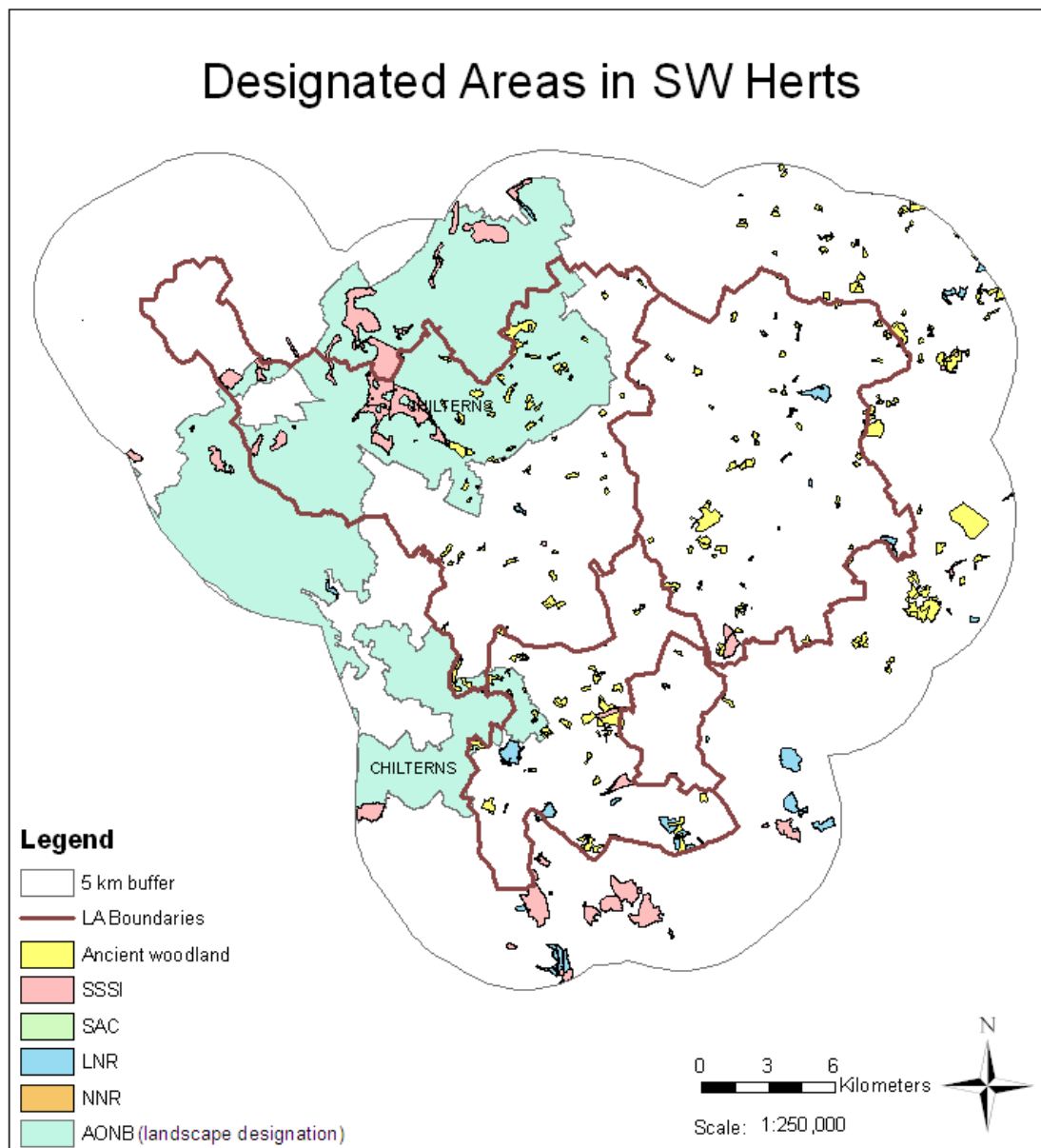


Figure 2: Designated areas in South West Hertfordshire

Designated Areas

In terms of International and European designations Dacorum contains one Special Area for Conservation (SAC) designated under the EC Habitats Directive. Chilterns Beechwoods, is designated for its broad-leaved deciduous woodland habitats. In addition, eight Sites of Special Scientific Interest (SSSIs) covering 635 hectares can be found in Dacorum (Roughdown Common, Little Heath Pit, Oddy Hill and Tring Park, Tring Woodlands, Tring Reservoirs, Aldbury Nowers, Ashridge Common and Wood, and Alpine Meadow).

Natural England maintains statistics on the condition of all SSSIs in England, and they have a Public Service Agreement target to have 95% of the SSSI area in “favourable” or “unfavourable recovering” condition by 2010. 98.4% of Dacorum’s SSSIs fall in these

categories (2010) compared to 92% in Hertfordshire as a whole. The figure for Dacorum has shown little change since 2004 whereas for Hertfordshire there has been a considerable increase from a level of 66% in 2004⁶.

There are no National Nature Reserves (NNR) in Dacorum but there are three Local Nature Reserves: Howe Grove Wood, Shrubhill Common and Long Deans. The locations of these sites will be taken into account, in the assessment of the LDF. There are also over 200 wildlife sites within Dacorum.

Dacorum's Biodiversity Action Plan is set out in the Dacorum Borough Nature Conservation Strategy⁷. On a county level "A 50 Year Vision for the Wildlife and Natural Habitats of Hertfordshire"⁸ was drawn up as a response to the UK Biodiversity Action Plan. It evaluates the status of habitats and species in the county and thereby identifies key habitats, species of national and local significance and areas with high biodiversity.

Species for which action plans have been prepared include, amongst others, great crested newt, bittern, stone curlew, song thrush, freshwater white-clawed crayfish, water vole, otter, dormouse, cornflower and a number of local species. Priority habitats for which action plans have been prepared include, amongst others ancient and/or species-rich hedgerows, chalk rivers, fens, reed beds and a variety of lowland habitats. These Biodiversity Action Plans should be taken into account by Dacorum Borough Council when deciding on issues which could impact on biodiversity directly or indirectly.

Hertfordshire's Quality of Life Report 2009 Report reports a number on indicator species which could potentially be used for monitoring:

Water vole; Hare; Grey heron; Skylark; Song thrush; House sparrow; Butterfly species; and Damselflies and Dragonflies.

Woodland Cover

Quantified figures for woodland cover were not available for Dacorum.

The county of Hertfordshire itself has a total area of woodland of 15,503 ha covering 9.5% of the county (see Figure 3). This is slightly above the UK average of 7.7% but well below the woodland coverage in continental Europe of 30%. The BAP states that Dacorum contains 2,407ha of woodland, 11.3% of the total area.

⁶ Hertfordshire Environmental Forum (2009) "Quality of Life Report 2009", available at <http://enquire.hertscc.gov.uk/gol/>

⁷ Borough of Dacorum (1999) "Dacorum Borough Nature Conservation Strategy", available at <http://www.ukbap.org.uk/lbap.aspx?ID=371>

⁸ Hertfordshire Environmental Forum and Herts and Middlesex Wildlife Trust (1998) "A 50 Year Vision for the Wildlife and Natural Habitats of Hertfordshire", available at <http://www.ukbap.org.uk/lbap.aspx?id=374>

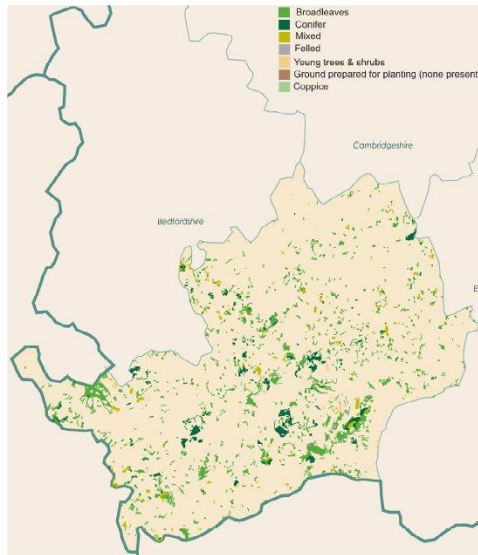


Figure 3: Woodland coverage in Hertfordshire by type of forest (Source: Forestry Commission⁹)

1.2.3 Trends and future baseline

The condition of SSSIs in Dacorum has remained above Natural England's Public Service Agreement target.

The draft East of England Plan (now revoked) proposed to build 79,600 new houses in Hertfordshire (4,600 in Watford, 6,300 in Dacorum, 7,000 St. Albans and 3,600 Three Rivers) by 2021¹⁰. If similar levels of development progress in the absence of the East of England Plan it is possible that these development pressures could adversely affect biodiversity in the absence of strategic guidance on dealing with sites with biodiversity value.

1.3 Climatic Factors

1.3.1 Relationship with other Plans and Programmes

The United Nations Framework Convention on Climate Change and the Kyoto Protocol provide the international framework for tackling climate change. In addition, the UN Millennium Declaration and Millennium Development Goals, and the EU Sixth Environment Action Programme stress its importance whereas the EU Bio Fuels Directive and the EU Directive to promote Electricity from Renewable Energy set out specific measures to mitigate climate change.

On a national scale, 'Climate Change: The UK Programme' and its review propose to cut UK's carbon dioxide emissions by some 60% by about 2050. This is supplemented by the white papers on energy and transport which highlight the importance of energy efficiency, renewable energy sources and sustainable transport. In a planning context PPS 22 'Renewable Energy' states regional and local planning documents shall contain policies to promote renewable energy. Planning and Climate Change (Supplement to Planning Policy Statement 1) indicates how spatial planning should contribute to reducing emissions and stabilising climate change (mitigation) and take into account the unavoidable consequences (adaptation).

At a more local level the Hertfordshire Renewable and Low Carbon Energy Study identifies opportunities for district heating (and CHP) and wind, and areas of constraint

⁹ Forestry Commission (2002) "National Inventory of Woodland and Trees - County Report Hertfordshire", available at [http://www.forestry.gov.uk/pdf/hertfordshire.pdf/\\$FILE/hertfordshire.pdf](http://www.forestry.gov.uk/pdf/hertfordshire.pdf/$FILE/hertfordshire.pdf)

¹⁰ East of England Regional Assembly (2004) "draft East of England Plan", available at <http://www.eera.gov.uk/category.asp?cat=452>

(areas not capable of delivering community or large-scale renewable or low carbon energy resources).

1.3.2 Baseline Information

Climate change is an issue that is at the forefront of both political and public thinking at present. Over the last century, the U.K. has seen an increase in the number of storms, and extreme weather spells (for example heat waves). Climate change is partially caused by the production of greenhouse gases, which heat the Earth and cause temperatures to rise. The burning of fossil fuels is a major contributor to greenhouse gas production. Rising temperatures will cause ice caps to melt and sea levels to rise. If climate change is not slowed down there is an increased risk of flooding, storms, drought, introduction of foreign pests, and insurance blight¹¹.

For the purpose of this report, data on carbon emissions (Table 4), improvements in domestic energy efficiency (

Table 5), and Local Authority energy consumption was collected (Table 6). It can be seen that overall carbon emissions per capita for Dacorum are the lower than the regional and national average, however domestic emissions per capita are higher than the regional average.

Table 4: Carbon dioxide emission estimates per local authority in 2007 (in kilo tonne CO₂)¹²

Local Authority	Industry and Commercial	Domestic	Road Transport	Land Use Change	Total	Population (thousands)	Per capita CO ₂ (in tonnes)	Domestic per capita CO ₂ (in tonnes)
Watford	214	189	110	0	514	79.7	6.5	2.4
Three Rivers	148	224	345	2	718	86.4	8.3	2.6
St. Albans	245	340	543	2	1130	132.3	8.5	2.6
Dacorum	242	342	305	4	894	138.6	6.5	2.5
Total East of England	15,782	13,250	14,439	636	4,4106	5,661	7.8	2.3
UK total	262,087	163,737	128,606	13,676	56,8105	59,537	9.5	2.8

Table 5: Percentage improvement in domestic energy efficiency (1/4/96-31/3/2004)¹³

Local Authority	Improvement in energy efficiency (%)
Watford	21.1
St Albans	15.4
Dacorum	17.9
Three Rivers	31.87

¹¹ Harman, J, Gawith, M. and Colley, M. 2005. Progress on assessing climate impacts through the UK Climate Impacts Programme, Weather, 60 (9), 258-262.

¹² Netcen (2003) "Local and Regional Estimates of Carbon Emissions 2007 (excludes aviation, offshore, shipping)",

¹³ DEFRA: _____

Table 6: Local Authority energy consumption¹⁴

Indicator	Watford		St Albans		Dacorum		Three Rivers	
	2002-2003	2003-2004	2002-2003	2003-2004	2002-2003	2003-2004	2002-2003	2003-2004
Actual/'Typical' energy consumption LA buildings - fossil fuels (consumption/m ²)	122.7	-	95.8	112.0	105.0	77.0	99.0	141.0
Actual/'Typical' energy consumption LA buildings – electricity (consumption/m ²)	136.6	-	225.7	234.0	110.0	78.0	97.0	87.0

Dacorum's domestic energy efficiency improved by 17.9% between 1/4/96 and 31/2/04¹³; and, Fossil fuel and electricity consumption by Dacorum Borough Council decreased between 2002 and 2004¹⁴.

Besides reducing greenhouse gas emissions to mitigate climate change, it is also important that local authorities adapt to the likely impacts. This is necessary since the climate is already changing and is likely to continue to do so for at least the next decades. Of particular importance is the issue of flood risk, this is dealt with in the water section (Section 1.8).

Local estimates of CO₂ emissions (tonnes CO₂) - domestic emissions per capita for Dacorum in 2004 was 2.4 tonnes compared to 2.6 in 2003, while total emissions per capita was 7.2 tonnes in the same time period (No change from 2003). Comparative figures for the other local authorities: St Albans 2.9/9.6; Three Rivers 2.9/9.5; Watford 2.5/6.6)¹⁵.

For the National Indicator 186 (NI186 - Per capita reduction in CO₂ emissions in the LA area) the latest reported figure for Dacorum is 10.7% (calendar year 2007) and for NI188 (Planning to Adapt to Climate Change) the latest reported figure is zero (financial year 2008/9).

1.3.3 Trends

It can be seen that domestic energy efficiency improved¹³ and domestic emissions per capita have also improved. There appears to be no trend regarding Local Authority energy consumption¹⁴.

Addressing the cause and effects of climate change is a central element to development at any level. Whilst with the support of other plans and policy guidance such as PPS25, and PPS1 some progress can be achieved in addressing climate change effects like flooding and promoting resource efficiency, only short term positive effects are likely in the absence of a strategic policy defining roles of public, residential and commercial developments in dealing with climate change.

¹⁴ ODPM: _____

¹⁵ Audit Commission – Local Area Profiles. _____

1.4 Cultural Heritage

1.4.1 Relationship with other Plans and Programmes

The European Spatial Development Perspective aims for balanced and sustainable development in the European Union. As part of that the conservation and management of natural resources and the cultural heritage is set out as one of three fundamental goals. In the UK, 'The Historic Environment: A force for our future' states the intention of the government to protect the historic environment and recognises its major contribution to the rural economy, where as PPS 5 'Planning and the Historic Environment' sets out specific guidance on how the planning system can foster the conservation of historic environmental and cultural heritage.

1.4.2 Baseline Information

English Heritage's Heritage Counts 2009 identifies that the four local authorities contain the following heritage designations:

Local Authority	Scheduled Monuments	Listed Buildings Grade I/II*/II	Parks and Gardens	Conservation Areas
Dacorum	32	12/57/831	3	25
St Albans	18	9/35/772	2	18
Three Rivers	3	3/14/334	3	22
Watford	0	2/3/87	1	8

None of England's historic battlefields or World Heritage Sites are located in Hertfordshire. However, 2 National Trust Properties can be found in the county: Ashridge Estate (Dacorum) and Shaw's Corner (near Wheathampstead).

Development pressures and changes in agricultural policy are the two major challenges for the East of England's historic environment according to English Heritage's Heritage Counts¹⁶. For South West Hertfordshire, being part of the London Arc in immediate proximity to Greater London, the planned housing growth and infrastructure developments could potentially have adverse impacts on the local historical heritage and the proposed change needs to be carefully managed.

¹⁶ English Heritage (2004) "Heritage Counts 2004 - The State of England's Historic Environment", available at <http://www.english-heritage.org.uk/heritagecounts/>

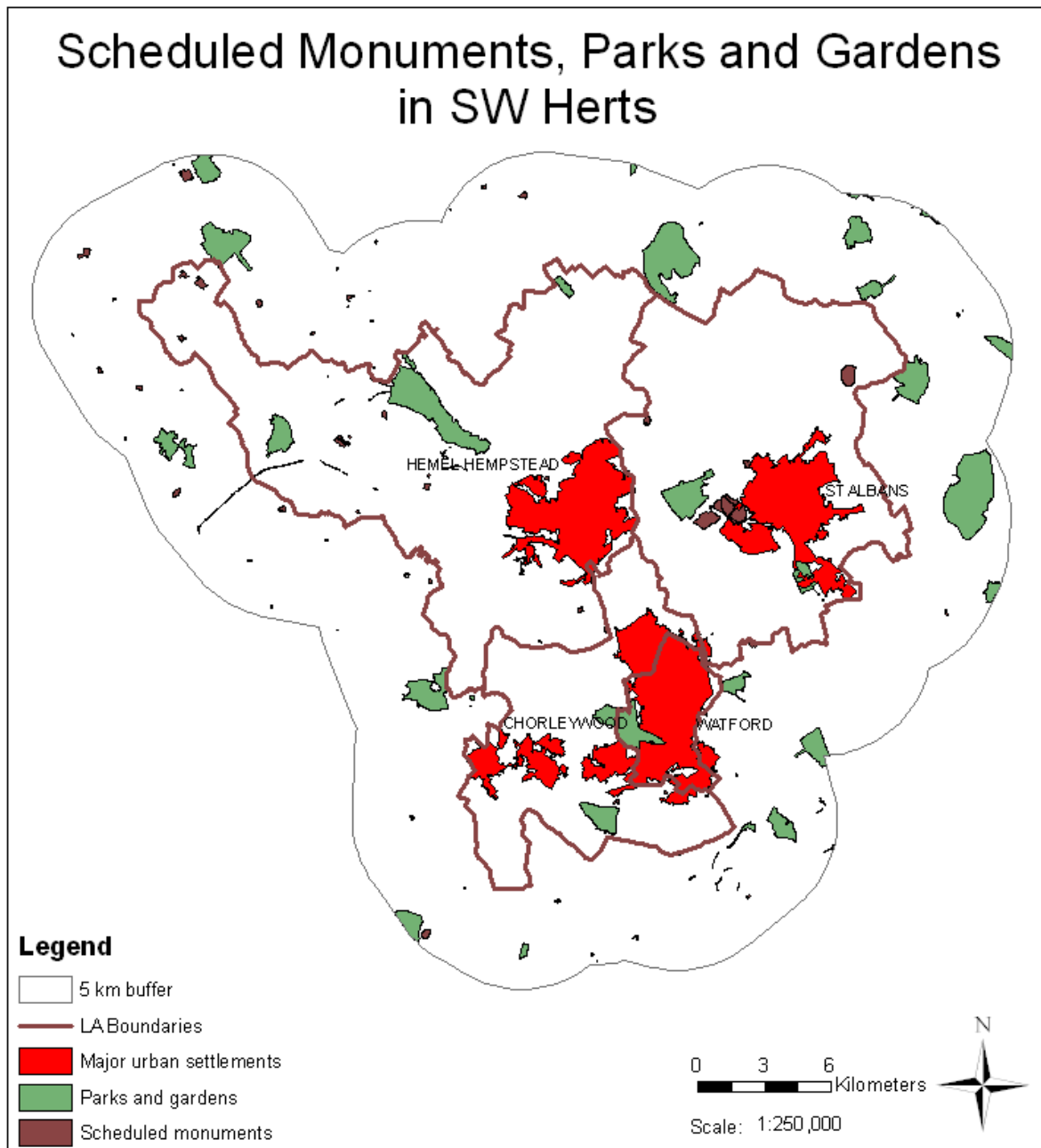


Figure 4: Registered parks and gardens and scheduled monuments in South West Hertfordshire

The following historic assets can be found in Dacorum:

- 32 Scheduled Ancient Monuments (Two Barrows (Chipperfield Common), Little London Moated Site, Site of Royal Palace, Site of Dominican Priory, Romano Celtic Temple Wood Lane End, High Street Green Roman Barrow, Boxmoor House Roman Villa, Gadebridge Roman Villa, Marlin Chapel Farm Moated Site, Berkhamsted Motte and Bailey Castle, Site of Roman Buidling, North of Berkhamsted Castle, Sections of Grims Ditch, Berkhamsted Common Romano-British Villa Dyke and Temple, *Bowl Barrows SSW of Nettleden Lodge*, Icehouse SW of Ashridge College, *Roman Settlement at the Cow Roast Inn*, Romano-British Settlement and Earthworks on the Berkhamsted Common, Stool Baulk, Two Barrows at Bridgewater Monument, Bowl Barrow in Turlshanger Wood, Bowl Barrow in Aldbury Nowers Wood, Settlement North of St Mary's Church, Ardwick Deserted Medieval Village, Deserted Village of Tiscott, Charter Tower, Hemel

Hempstead), including two identified as at risk: Bowl Barrows SSW of Nettleden Lodge and Roman Settlement at the Cow Roast Inn;

- 905 Listed Buildings
- 25 Conservation Areas; and
- Four Registered Parks and Gardens (Markyatecell Park (37 ha), Ashridge (577 ha), Tring Park (139 ha), Water Gardens (Hemel Hempstead).

Two heritage sites have been identified as being at risk in the English Heritage "Heritage at Risk 2010" report. These are:

- Bowl barrow 950m SSW of Nettleden Lodge (principle vulnerability – metal detecting);
- Roman settlement at Cow Roast Inn, Northchurch (principle vulnerability – arable ploughing)

It should be noted that Hertfordshire County Council have undertaken extensive work with regards to local archaeological assets¹⁷. Its Hertfordshire Historic Environment Record brings together (HER) information regarding Hertfordshire's historic environment in a computerised form. It contains information on historic buildings, archaeological remains, historic sites and military remains (Figure 5). In addition the outputs of the County Council's Extensive Urban Survey project contain information on the County's historic towns. It is anticipated that this information will be used to assess in more detail how archaeological assets could be affected by the proposed planning policies.

1.4.3 Trends

No trend information exists for cultural heritage.

¹⁷ See <http://www.hertsdirect.org/libsleisure/heritage1/archaeology/sitesandmon>

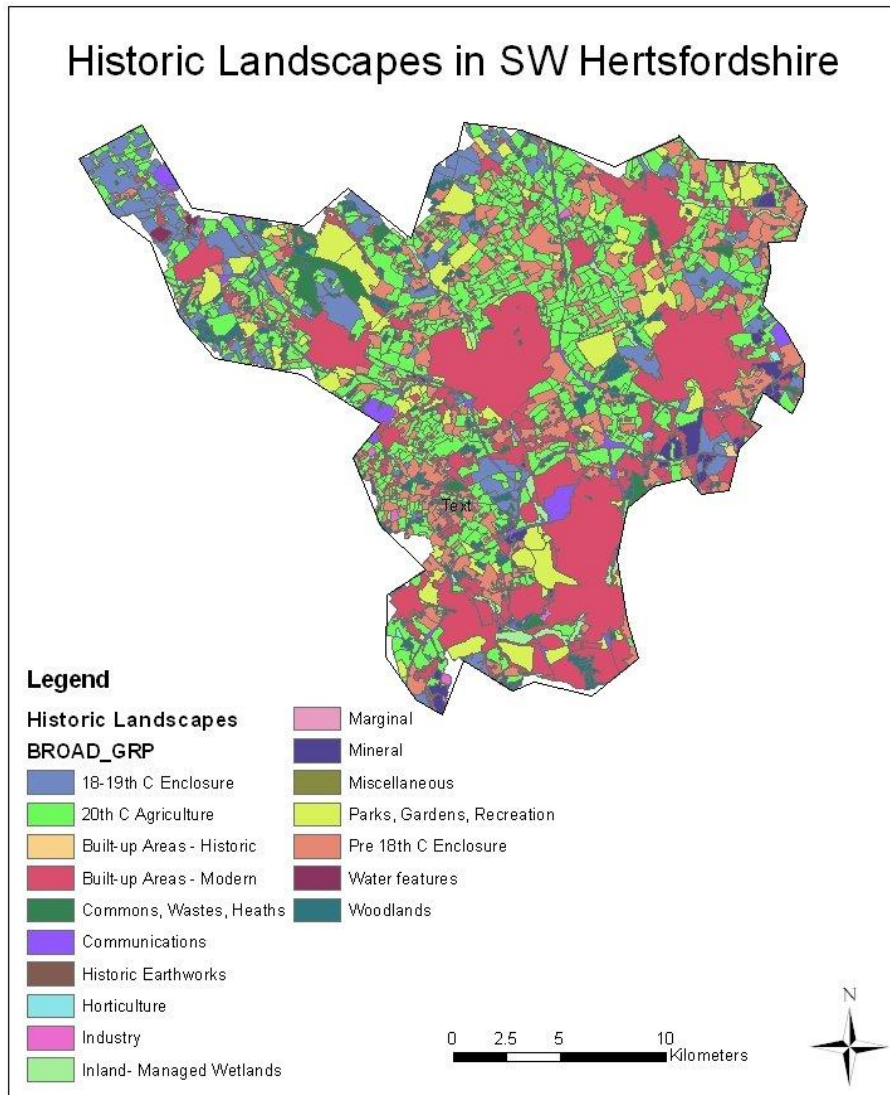


Figure 5: Historic Landscape Classification in South West Hertfordshire

1.5 Landscape

1.5.1 Relationship with other Plans and Programmes

The European Landscape Convention aims to promote European landscape protection, management and planning and to organise European co-operation on landscape issues. The protection and enhancement of the countryside is often dealt with in conjunction with biodiversity issues, such as in the biodiversity strategy for England 'Working with the Grain of Nature', or agricultural issues, such as farming schemes and subsidies. In addition, the new Countryside and Rights of Way Act 2000 (CRoW) created a new statutory right of access to open county and registered common land and provides the context for many accessibility issues in Britain. More locally, the Chilterns AONB strategy sets the framework for protecting and enhancing the Chilterns – an area of outstanding natural beauty lying partly in SW Hertfordshire.

1.5.2 Baseline Information

Tranquillity/Light Pollution

Satellite data shows that light pollution is increasing and tranquillity is decreasing in both the London Arc area and the East of England. This resulted in only 5% of truly 'dark skies' being left¹⁸; most of them in deep rural areas further away from Greater London (see Figure 6). However, in Hertfordshire light pollution increased by a modest 5% compared with a 21% increase for the overall region. Over an even longer period (between 1960s and 1990s) 'tranquil areas' and 'tranquil areas with some intrusion', as based on the Campaign to Protect Rural England's mapping exercise¹⁹, have been decreasing substantially mainly due to new housing and infrastructure developments (see Figure 7). For the purpose of this mapping exercise 'tranquil areas' were defined as:

'Places which are sufficiently far away from the visual or noise intrusion of development or traffic to be considered unspoilt by urban influences''

These places were identified through specific criteria, such as certain distances away roads, towns, airports and power stations.

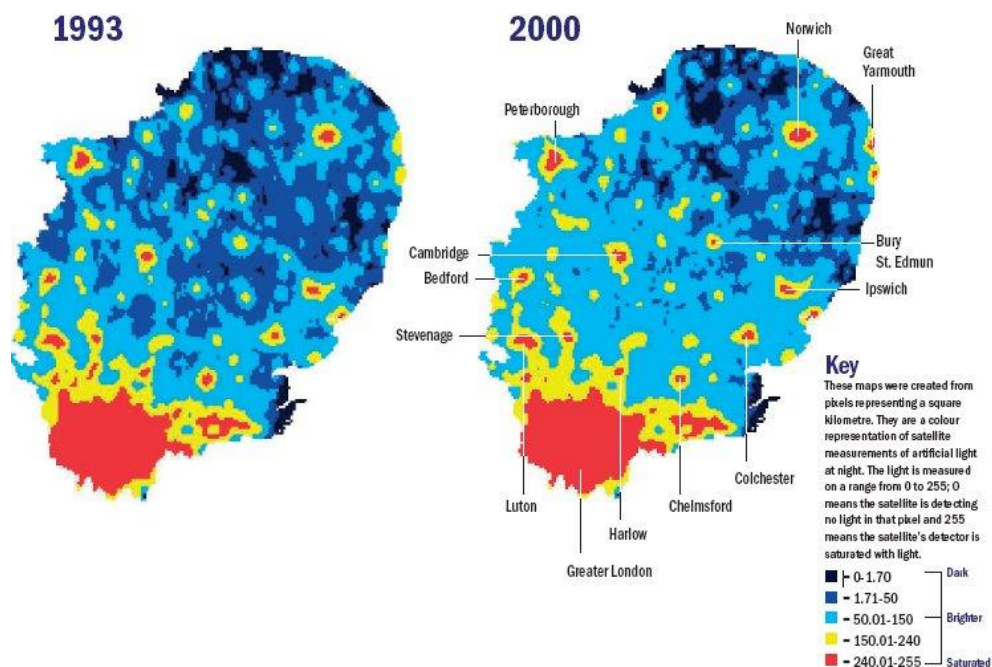


Figure 6: Light pollution in the East of England (source: Campaign to Protect Rural England)

¹⁸ Campaign to Protect Rural England (2003) "Night Blight! Report",

¹⁹ Campaign to Protect Rural England (2005) "Mapping Tranquillity - Defining and assessing a valuable resource",

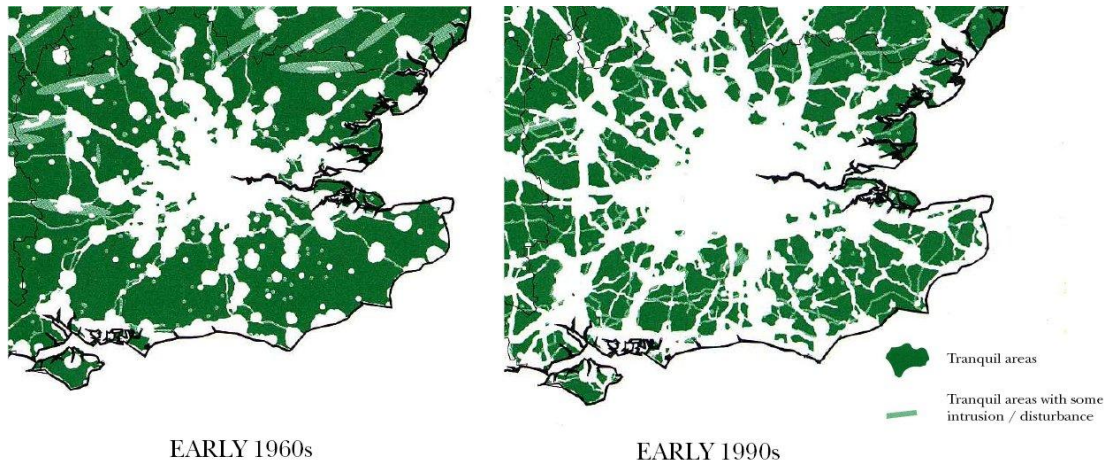


Figure 7: Loss of tranquillity between the 1960's and 1990's (source: Campaign for Rural England)

Landscape Character

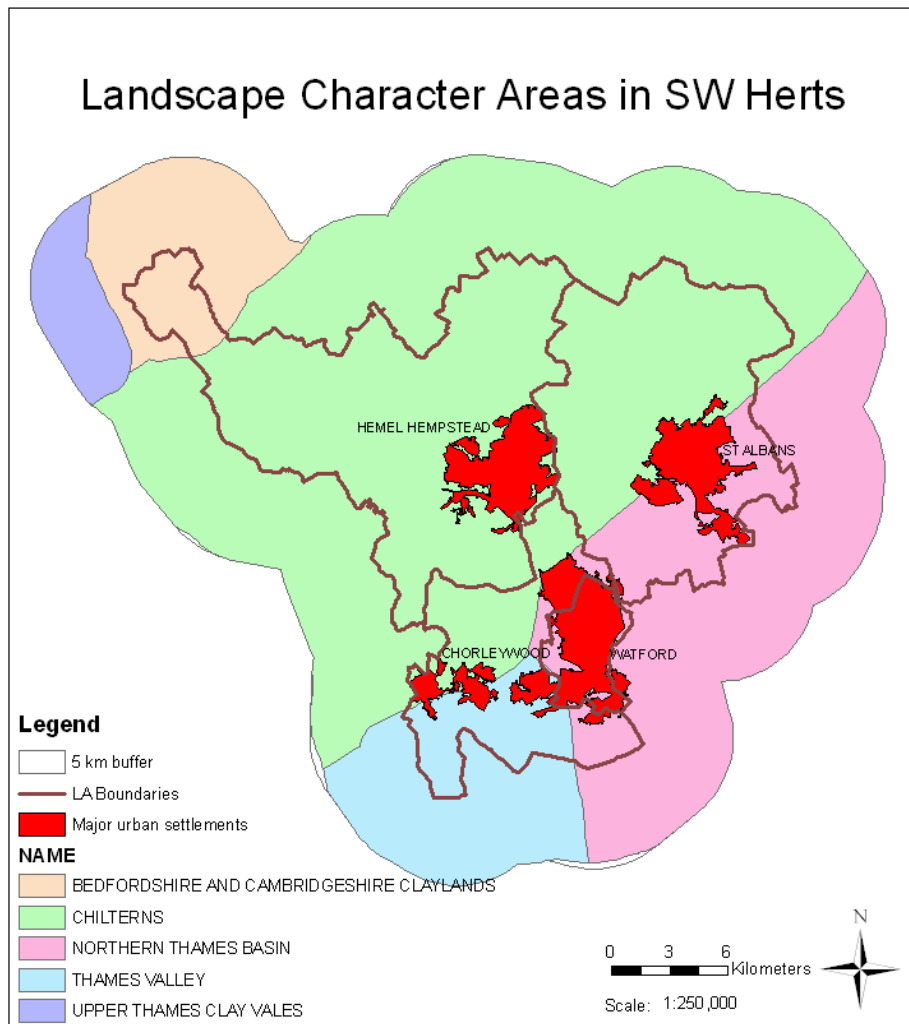


Figure 8: Landscape Character Areas in South West Hertfordshire (Source: MAGIC)

Dacorum falls into two Landscape Character Areas (LCAs), "Chilterns" and "Bedfordshire and Cambridgeshire Claylands" whereby the former covers the majority of Dacorum (see Figure 8). According to the Countryside Agency they are characterised as follows²⁰:

"Chilterns consists mainly of chalk hills, small fields and dense network of ancient hedges, often on steep ground. The agricultural landscape is often dominated by hedges, trees and small woodlands. Scattered villages and farmsteads can be found; some of medieval origin, displaying consistent use of traditional building materials including flint, brick, and clay tiles. A network of ancient green lanes and tracks covers the area including the Ridgeway which links numerous archaeological sites and settlements."

The Countryside Quality Counts assessment²¹ for the Chilterns LCA (1999-2003) is summarised as: "*The changes are mixed, and while development continues to erode the character of the area locally, changes in the farmed and wooded landscape seem to have maintained the overall character.*"

The Bedfordshire and Cambridgeshire Claylands are characterised by a gently undulating topography and plateau areas, divided by broad shallow valleys. It is predominantly an open and intensive arable landscape. The river corridors of Great Ouse and Ivel compose cohesive sub-areas characterised by flood plain grassland, riverine willows and larger hedges. Settlements cluster around major road and rail corridors (A1 and M1). In addition, parts of Dacorum fall into the Area of Outstanding Natural Beauty (AONB) "Chilterns" which consists of gently rolling hills covered with beech woodland and chalk downland providing habitat to wild flowers and red kites. Dacorum, being in close proximity to London, experienced as most areas in the London Arc, some changes inconsistent with landscape character²².

The Countryside Quality Counts assessment for the Bedfordshire and Cambridgeshire Claylands is summarised as: "*Although development has had a major impact throughout, the characteristics of the farmed landscape and woodlands have been maintained or strengthened*".

Hertfordshire County Council has conducted in depth work regarding local landscape character assessments²³. It defined Hertfordshire Landscape Regions which are based on Countryside Agency/ English Nature Countryside Joint Character Areas and supplemented with some local refinements). It is anticipated that this information will be used to assess in more detail how local landscape character could be affected by the proposed planning policies.

²⁰ Countryside Agency (2000) "Landscape Character Areas in the South East and London "

²² Levett-Therivel and LUC (2004) "East of England Plan - SA Report", available at <http://www.go-east.gov.uk/goeast/publications/>

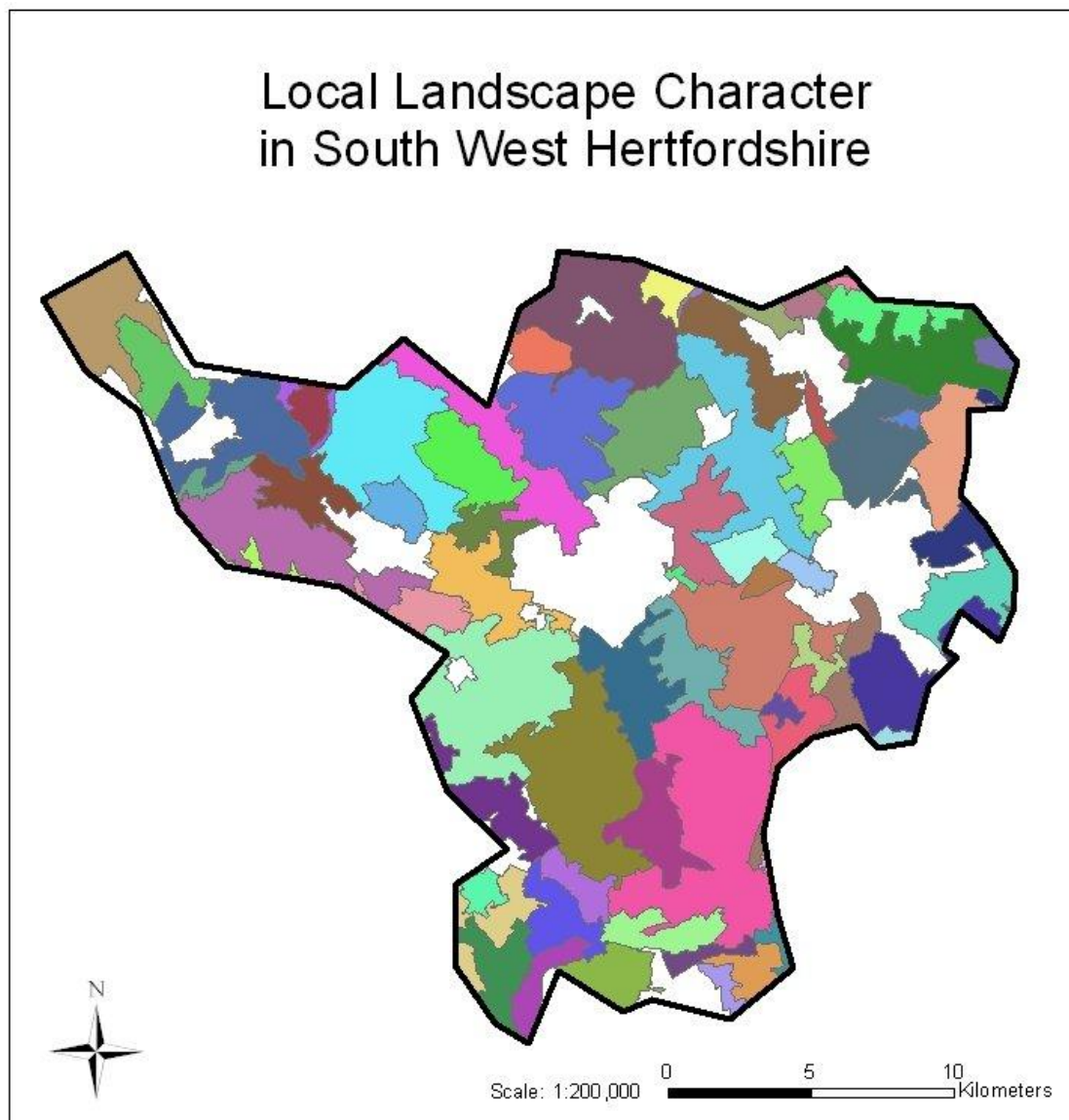


Figure 9: Local Landscape Character Areas in South West Hertfordshire (Source: adapted from Herts CC)

1.5.3 Trends

Loss of tranquillity and light pollution are likely to increase further due to development pressures. Inconsistent changes to landscape character are likely to continue due to development pressures e.g. the aim to build a significant number of new houses in the sub-region.

1.5.4 Data Gaps/Limitations

Development pressure to achieve target housing and employment may directly or indirectly affect areas of landscape character, assuming existing guidance and policies only are taken forward. For example the Chilterns AONB Management Plan 2008 may address development pressures such as quarrying, transport, housing and employment land in the short term (i.e. up to 2013) and the plan may be revised for the medium term thus protecting this landscape feature. However other local landscape features in the Borough are likely to be negatively affected with increasing development demands in the future. Thus a policy direction to addressing this issue is required.

1.6 Material Assets

1.6.1 Relationship with other Plans and Programmes

The World Summit Johannesburg in 2002 and the 6th EU Environment Action Programme highlighted the need of greater resource efficiency, waste reduction and the promotion of renewable energy to make sustainable development feasible.

Numerous pieces of European legislation deal with waste issues; the Landfill Directive and the Waste Framework Directive are only two of them. The former aims to reduce the amount of waste sent to landfill whereas the latter highlights the importance of the waste hierarchy and sets the framework for national waste management licensing. The UK Waste Strategy sets out measures to make waste management in the UK more sustainable, such as decoupling waste from economic growth and promoting the composting of organic waste. PPS 22 'Renewable Energy' sets out the Government's planning policies for renewable energy. It details eight key principles regional planning bodies and local planning authorities should adhere to in their approach to planning for renewable energy.

On a regional level, 'A Shared vision, the regional economic strategy for the East of England stresses the need to improve resource efficiency, whereas the Hertfordshire Waste Plan, Hertfordshire Waste Strategy and the Hertfordshire Minerals and Waste Development Framework set out issues how to address waste issues locally.

1.6.2 Baseline Information

Waste

Waste production and disposal is a growing problem. In almost every country, production of waste increases at least as fast as its gross national product²⁴. Disposal of this waste is becoming increasingly difficult, with diminishing numbers of suitable sites for landfill disposal²⁵.

Legislation to reduce waste production, and to increase re-use, and recycling has been introduced²⁶. Stringent targets, particularly for biodegradable waste, have been set by the European Union. The Member States must reduce the amount of biodegradable sent to landfill to 75% of 1995 levels by 2006, 50% of 1995 levels by 2009, and 35% of 1995 by 2016²⁶. If these targets are not met, heavy fines will be imposed on the U.K²⁶.

In Dacorum, St Albans, Three Rivers and Watford waste generated per head decreased between 2007/08 and 2008/09 (Figure 10). This reverses the trend that saw the amount of waste per head increase steadily from 2001/2 to 2006/7 (based on data from the now obsolete Best Value Performance Indicators (BVPI)).

²⁴ Cooper, J. 2001. Waste: striving for a more sustainable future, *Local Environment*, 6 (2), 109-111

²⁵ Cheeseman, K. and Phillips, P. 2001, *The Northamptonshire Resource Efficiency Project: the exit strategy*, Resources, Conservation and Recycling, 32, 203-226

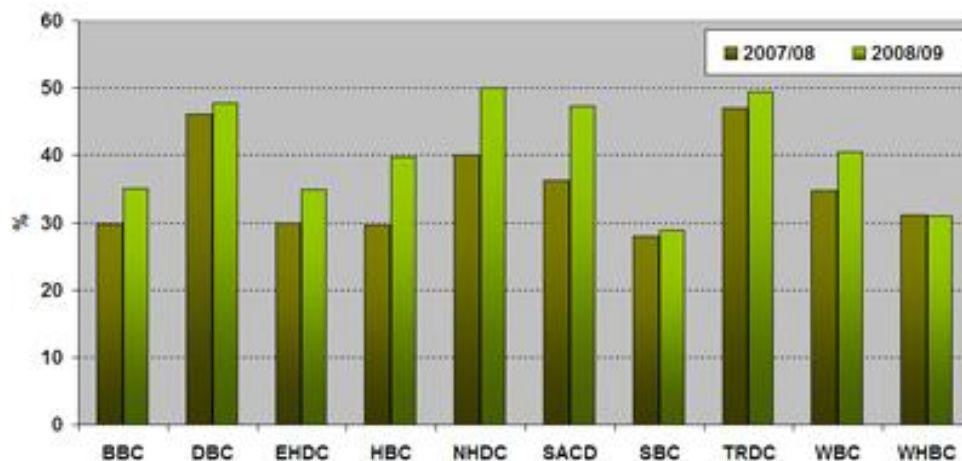
²⁶ Williams, P. 2005. *Waste Treatment and Disposal*, Second edition, John Wiley and Sons Ltd, Chichester, 380pp

Indicator WS1 - Household waste per capita		
Local Authority	Waste per Capita (kg) 2007/08	Waste per Capita (kg) 2008/09
Broxbourne	451	424
Dacorum	422	409
East Herts	419	421
Hertsmere	412	401
North Herts	447	424
St Albans	402	397
Stevenage	412	408
Three Rivers	418	404
Watford	401	395
Welwyn Hatfield	423	433
<i>HWRCs</i>	83	79

Source: HCC Waste Management Unit

Figure 10: Household waste per head (Source: Herts QofL 2009)

In 2008/09, the level of household waste recycled or composted in Hertfordshire was 44%, up from 38% the previous year, progressing towards the county's average recycling target of 50% by 2012/13. The breakdown by local authority is provided in Figure 11.



Source: Hertfordshire County Council's Waste Management Unit

Figure 11: Percentage of waste re-used, recycled or composted (NI 192) (Source: Herts QofL 2009)

For the National Indicator 192 (NI192 – Percentage of household waste sent for reuse, recycling and composting) the latest reported figure for Dacorum is 47.79% (financial year 2008/9).

Land Use

As already mentioned, there are conflicting pressures on land use in Hertfordshire. This is particularly true for housing and associated infrastructure which has to be balanced with the protection of the natural environment²⁷.

To achieve both the more efficient use of previously developed land (PDL) and the reduction of development pressures on undeveloped (greenfield sites and metropolitan greenbelt land), the government set a target that 60% of all new developments should be built on brownfield sites.

A measure of the more efficient use of material assets in the form of land is the local authority best value performance indicator (BVPI) BV 106 which covers the percentage of new homes constructed on previously developed land (see Figure 12).

Hertfordshire's Residential Development on Previously Developed Land (PDL)					
District	Average per annum 2001- 05	2005/ 06	2006/ 07	2007/ 08	2008/ 09
BBC	50%	80%	76%	93%	83%
DBC	96%	97%	99%	97%	96%
EHDC	83%	84%	96%	96%	87%
HBC	98%	99%	100%	100%	95%
NHDC	52%	48%	58%	66%	74%
SACD	97%	97%	99%	94%	98%
SBC	48%	48%	52%	46%	100%
TRDC	99%	100%	90%	99%	99%
WBC	99%	100%	100%	100%	100%
WHBC	71%	99%	100%	100%	100%
County	79%	86%	87%	87%	93%

Source: HCC Development Commitments Survey

Figure 12: Residential Development on Previously Developed Land (Herts QofL 2009)

The figures illustrate that a much higher proportion of new developments in South West Hertfordshire was built on previously developed land compared with the regional average of 57% for 1999-2002²⁸. However, previously developed land is a finite resource and might not be as readily available in the future, thus leading to greater pressure to build on greenfield sites.

Detailed information about the amount of potentially contaminated land in the four authorities concerned was not available for this sustainability appraisal.

A measure of achieving higher land efficiency is increasing housing density. However, to sustain quality of life this has to be combined with good design. Unfortunately, density figures of previous housing developments have not been available to inform this report.

The same holds true for local aggregates and mineral resources. Extracting primary resources can cause a variety of impacts which could potentially be avoided by using

²⁷ HEF (2004) "Quality of Life Report 2004"

²⁸ ONS (2003) "Regional Quality of Life Counts",

secondary or recycled materials. Information of the current usage of these materials would therefore be advantageous for this assessment.

1.6.3 Trends

The percentage of household waste composted and recycled is increasing, and the amount of waste collected per head is also now decreasing.

The East of England Plan (now revoked) proposed to build 79,600 new houses in Hertfordshire by 2021²⁹. Although the aim is to build the majority of these houses on previously developed land, a significant proportion might be built on undeveloped land. The associated land take could lead to a variety of economic, social and environmental impacts. Although PPS 3 and other Planning policies may advocate uptake of PDL, unless a preferential selection of PDL is explicitly stated for any development in the district, conservation of top soil may not be a practice by default.

1.6.4 Data Gaps/Limitations

Information regarding land contamination, mineral and aggregate use/reserves was not available for this study.

1.7 Soil

1.7.1 Relationship with other Plans and Programmes

Besides the higher profile environmental issues, such as climate change, loss of biodiversity and desertification, impacts on soil seem often to have a lower priority. This is despite the fact that soil is the foundation of the environment, landscape, wildlife and food production. Nevertheless, on European level the EU 6th Environment Action Programme highlights soil protection as one of main priorities for the future, whereas MPG 6 'Aggregates Provision' advises mineral planning authorities how to balance best social, economic and environmental issues related to mineral and aggregates extraction which can impact on soil. The Soil Action Plan for England has a vision to ensure that England's soils will be protected and managed to optimise the varied functions that soils perform for society.

²⁹ East of England Regional Assembly (2004) "draft East of England Plan", available at <http://www.eera.gov.uk/category.asp?cat=452>

1.7.2 Baseline Information

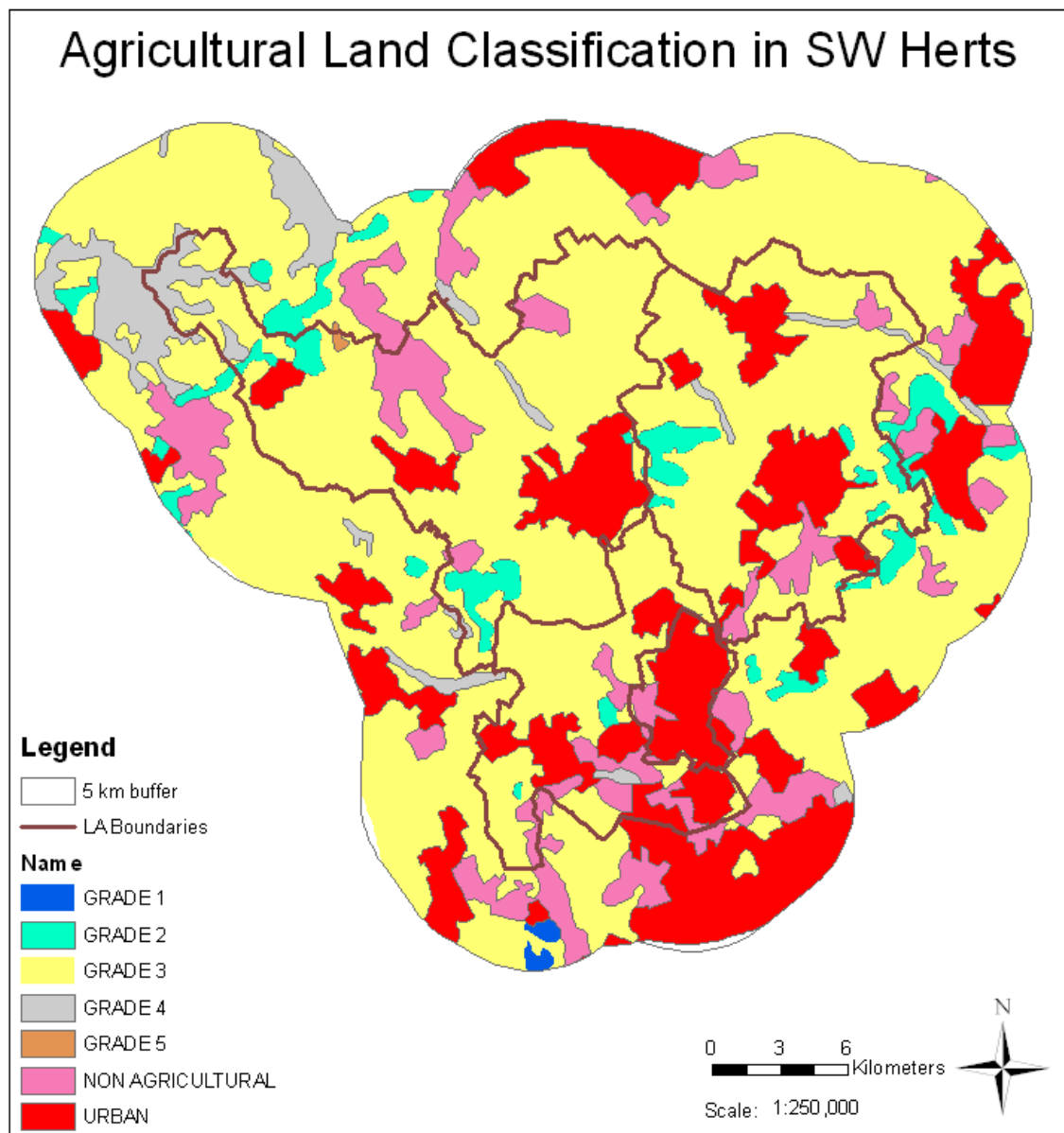


Figure 13: Agricultural Land Classification for South West Hertfordshire

South-West Hertfordshire's soils are mainly classified as grade 3 agricultural land, with some graded 2 soils (see Figure 13). A significant proportion is covered by urban areas; a fact it has in common with many areas in the London Arc. Dacorum and St. Albans contain mostly slightly acid loamy and clayey soils with impeded drainage, whereas Three Rivers is characterised by more freely draining, slightly acidic sand soils. Watford, being a borough, is contains mainly built up areas³⁰.

³⁰ Levett-Therivel and LUC (2004) "Sustainability Appraisal of the East of England Plan", available at <http://www.eera.gov.uk/category.asp?cat=120&id=SXE12B-A77F5420>

Major impacts on soil are soil loss, contamination or compaction which can stem from a variety of sources, such as³¹:

- Erosion;
- New developments (e.g. housing and accompanying infrastructure);
- Nutrient loss and diffuse pollution from agriculture;
- Climate change;
- Air pollution and run-off from roads; and,
- Quarrying.

1.7.3 Trends

No trend information is available relating to soils. In terms of future trends, the plans for significant levels of new housing development in the sub-region could adversely affect soils in the area.

1.7.4 Data Gaps/Uncertainties

More detailed information about local soil properties was not available for this study.

1.8 Water

1.8.1 Relationship with other Plans and Programmes

On an international level, the Millennium Development goals highlight the need to tackle issues, such as climate change, conserving biodiversity and protecting water resources. In Europe, the Water Framework Directive requires Member States to achieve 'good ecological status' of inland water bodies by 2015, whilst the EU Nitrates Directive addresses diffuse pollution from agriculture. In England, PPS 23 'Pollution Control' and PPS 25 'Development and Flood Risk' set out how the planning system can help to reduce pollution of water courses and flood risk. A Strategic Flood Risk Assessment has been undertaken to identify areas that are at risk from flooding and a Water Cycle Scoping Study is being undertaken to inform the preparation of the LDF and provide evidence to support any policies that relate to water resources, supply and sewerage, wastewater treatment, flood risk, water quality and the wider water environment.

1.8.2 Baseline Information

Water is an essential natural resource. It is important that water resources are protected so that the risk of harm to the environment and to human health can be reduced as far as possible. Nitrate and phosphate levels, in particular, need to be monitored closely due to the risk of eutrophication and loss of biodiversity.

The main sources of water quality information are now the River Basin Management Plans which provide information on the ecological and chemical status of water bodies. However this information was only first published in 2009 and there is therefore no trend information available. As a result this report also provides earlier data on the chemical and biological quality of rivers, and the % of rivers with high phosphate or nitrate concentrations so that trends can be understood. In addition, the number of planning permissions objected to and refused due to flood risk has been collected. The data has been compared against regional data.

³¹ Environment Agency (2004) "The State of Soils in England and Wales",

Some areas of Hertfordshire suffer from over abstraction of water resources which has adverse impacts on flora and fauna. The proposed new developments in South West Hertfordshire are likely to lead to an increases demand for water.

Water Quality

In general, chemical water quality between 1995 and 2006 improved, and biological water quality declined (Table 7 and Table 8). There appears to be no obvious trend regarding phosphate and nitrate concentrations (Table 9 and Table 10).

Table 7: Chemical Water Quality³²

Local Authority / Region	1995				2000				2006			
	%Good	%Fair	%Poor	%Bad	%G	%F	%P	%B	%G	%F	%P	%B
Watford	52	48	-	-	85	15	-	-	52	48	-	-
St Albans	54	46	-	-	78	22	-	-	93	-	7	-
Dacorum	18	74	8	-	28	69	3	-	14	45	42	0
Three Rivers	24	70	-	-	60	40	-	-	5	71	24	-
East of England	39.7	47.3	12.8	0.2	45.8	46.9	6.9	0.4	42.4	47.3	10.1	0.2

Table 8: Biological Water Quality³²

Local Authority / Region	1995				2000				2006			
	%G	%F	%P	%B	%G	%F	%P	%B	%G	%F	%P	%B
Watford	34	66	-	-	82	7	12	-	52	7	33	9
St Albans	55	45	-	-	65	35	-	-	43	57	-	-
Dacorum	76	24	-	-	57	17	22	4	15	39	46	-
Three Rivers	90	10	-	-	76	12	9	4	36	19	37	8
East of England	71.0	27.9	0.9	0.2	80.9	18.1	0.9	0.1	77.4	20.8	1.7	0.1

Table 9: Phosphate Levels³²

Local Authority / Region	1995	2000	2006
	% High	% High	% High
Watford	100	100	100
St Albans	32.2	59	71
Dacorum	72	72	67
Three Rivers	100	100	93
East of England	82.6	85.4	81.0

Table 10: Nitrate Levels³²

Local Authority / Region	1995	2000	2006
	% High	% High	% High
Watford	51.7	51.7	51.7
St Albans	56.6	32.2	43
Dacorum	16.1	15.1	8.2
Three Rivers	19.9	19.9	41.9
East of England	94.0	92.8	93.7

³² DEFRA e-Digest: _____

The chemical water quality in Dacorum deteriorated between 1995 and 2006. The percentage of rivers considered as having good or fair chemical quality has remained lower than the average for the East of England³².

The biological water quality in Dacorum also declined between 1995 and 2006. The percentage of water considered as having good or fair biological quality was higher than the average for the East on England in 1995, but lower than the East of England average in 2000 and 2006³². Phosphate concentrations in Dacorum have decreased slightly between 1995 and 2006 and remain below the East of England average³².

Nitrate concentrations in Dacorum remained significantly below the average level for the East of England. Levels decreased steadily between 1995 and 2006³².

After 2006 the monitoring of water quality changed to conform with the requirements of the Water Framework Directive. Under this new classification the status of the main rivers in Dacorum are as follows:

- River Bulborne: overall status is moderate (ecological status is moderate, chemical status is good);
- River Gade: overall status is bad (ecological status is moderate, chemical status is fail).

Water Quantity

The East of England is the country's driest region, and water resources are over abstracted in the region. Current and future demands for water cannot be met from within the region³³.

The Audit commission Local Area profiles (2010) report that the daily domestic water use (per capita consumption, litres) in 2004 was 192 litres/day in Dacorum, St Albans, Three Rivers and Watford. No trend information is available for this specific indicator.

More recent information from the Hertfordshire Quality of Life Report 2009 identifies that Veolia Water Three Valleys (VWTV) domestic customers without meters maintained 2008's water usage at an average of 175 litres per person per day in 2009. Water usage by customers with meters fell back to 2007 levels from 153 litres in 2008 to 142 litres per person per day in 2009 (Herts QoL 2009).

Dacorum lies within the River Colne catchment. The majority of the rivers in the Colne catchment are susceptible to low flows due to low groundwater levels, which are increasingly exacerbated by drought conditions and abstractions³⁴. The Chilterns Chalk Streams are particularly susceptible to over abstraction. The Catchment Abstraction Management Strategy (CAMS) for the Colne catchment has identified that the underlying chalk aquifer is assessed as being over-abstracted.

The Water Cycle Scoping Study (April 2010) indicates that in relation to a housing growth level of 9,000 homes (2010 – 2031), for potable water supply; waste water and sewerage network capacity; flood risk; and the water environment, the only major constraints are those related to the Maple Lodge waste water treatment works which serve Hemel Hempstead and Kings Langley. However for a higher growth scenario of 17,000 in the same period there would be wider issues including the supply of potable water.

³³ <http://insighteast.org.uk/Webdocuments/approved/FTPUploads/EACoreRSS14WRImpacts.pdf>

³⁴ Dacorum Borough Council, St Albans City and District Council, Three Rivers District Council, Watford Borough Council, Welwyn Hatfield Borough Council Water Cycle Study Scoping Study (Hyder, April 2010)

Flood Risk

Table 11 below displays the number of planning permissions objected to and refused on flood risk grounds between 04/2004 and 03/2008³⁵. It can be seen that more planning permissions were objected than refused. This may be due to the fact that mitigation measures were introduced to reduce the flood risk³⁵.

Table 11: Planning permissions objected to and refused³⁵

Local Authority / Region	Planning permissions objected to by Environment Agency on flood risk grounds (04/2007 – 03/2008)	Planning permissions refused in line with Environment Agency advice (04/2007 – 03/2008)
Watford	4	0
St Albans	8	1
Dacorum	19	0
Three Rivers	11	3

1.8.3 Trends

In Dacorum, both biological and chemical water quality declined between 1995 and 2006. Over abstraction is a continuing issue.

2 Social Factors

2.1 Human Health

2.1.1 Relationship with other Plans and Programmes

The planning process can affect the health of the population of the area. An unhealthy population may place increasing demands on the requirement for services and resources (such as doctor's surgeries) whilst the provision of the infrastructure to support healthy lifestyles can be encouraged by the provision of public open space or leisure facilities, the reduction of crime, severance, noise, air pollution and improving the access to services and facilities. Objectives regarding human health are embodied at the highest tiers of plan making, indeed the EU Sustainable Development Strategy (2001) include, 'Address threats to public health', amongst its headline objectives.

At a national level health is tackled through a number of documents, including PPG17 'Planning for Open Space, Sport, and Recreation', which recognises the health and wellbeing value of recreational and open spaces, and PPG13 'Transport', which aims to encourage walking and cycling. However, the primary document relating to human health at this level is the Government Health White Paper – 'Choosing Health: making Healthier Choices Easier'. This document contains a number of priorities which should be taken into account by the LDF and SA, in particular those relating to 'increasing exercise'.

Some of the general aims of the Hertfordshire Structure Plan (1991-2011) are to improve quality of life, and to encourage walking/cycling. These aims fit with the Health White Paper priorities, and as part of the Structure Plan, should be disseminated down into Borough and District planning documents.

Dacorum's 'Community Plan: Dacorum 2015', and its Community Safety Strategy (2005-2008), both seek to contribute to the wellbeing of Dacorum's residents by reducing fear of crime and actual crime; with 'Dacorum 2015' also aiming to improve healthcare

³⁵ Environment Agency – High Level Target 12: _____

provision. Crime, and fear of crime, is seen as an issue within the Borough and therefore should be addressed where possible in the LDF.

2.1.2 Baseline Information

Hertfordshire is in general a very healthy county. In the 2001 Census questions were asked for the first time about general state of health and the provision of unpaid care. Of Hertfordshire's population 6.6% have health reported as not good, compared to 7.6% in the Eastern Region and 9.0% in England. Table 12 shows the percentage of resident population in each group that classify themselves as being in either good, fairly good or not good health and also provides the percentages of people that have limiting long term illnesses, are of working age and have a limiting long term illness and finally the percentage of households with one or more person with a limiting long term illness. This data is recorded for England and Wales, East of England, Watford, St Albans, Dacorum and Three Rivers.

Table 12: Population breakdown by health group³⁶

	England and Wales	East of England	Watford	St Albans	Dacorum	Three Rivers
General health: Good	68.55%	70.35%	72.57%	75.48%	73.28%	73.58%
General health: Fairly Good	22.23%	22.05%	20.59%	18.62%	20.32%	19.93%
General health: Not Good	9.22%	7.60%	6.85%	5.90%	6.40%	6.49%
People with a limiting long term illness	18.23%	16.21%	14.21%	13.08%	13.82%	14.26%
People of working age with a limiting long term illness	13.56%	11.40%	9.86%	8.59%	9.49%	9.18%
Households with one or more person with a limiting long term illness	34.05%	30.77%	27.40%	25.39%	27.33%	27.95%

Table 13 shows the percentages of infant mortality for the specified areas over three time periods, indicating a trend for all the areas, illustrating a decline in infant mortality rates between 1999 and 2003.

Table 13: Infant Mortality Rate³⁷

Date	Dacorum %		St. Albans %		Three Rivers %		Watford %	
	Infant Mortality / 1000 Live Births	Still Births/ 1000 Live Births	Infant Mortality / 1000 Live Births	Still Births/ 1000 Live Births	Infant Mortality / 1000 Live Births	Still Births/ 1000 Live Births	Infant Mortality / 1000 Live Births	Still Births/ 1000 Live Births
2001	4.8	3.0	4.2	4.2	6.3	7.3	7.2	3.6
1999-2001 pooled	4.2	4.0	3.6	3.7	3.3	4.6	5.4	4.5

37

<http://www.hertslink.org/portal/Observatory/Data%20by%20Subject/Life%20in%20the%20community/Quality%20of%20Life/Quality%20of%20Life%20Indicators/QoL11%20Infant%20Mortality.xls>

2000-2002 pooled	3.0	3.2	3.6	3.9	3.1	5.2	6.7	5.7
2001-2003 pooled	4.5	3.5	2.9	5.4	3.9	4.9	6.1	5.8

In the Borough of Dacorum, 8,823 people reported their general health as not good, the 41st lowest rate amongst the 48 regional districts. The areas figures for health are relatively similar to our other three areas with 73.28% of the population residing there classifying their health as being good. ODPM BVPI indicators for 2003/4 show that 11.3 working days were lost to illness in Dacorum, compared to a regional average of 9.2. Infant mortality rates between 1999 and 2001 were 4.2 (per 1000 births), which compares to a national average of 5.6.

In the matter of unpaid care, 13,057 people (approximately 9.4% of people) provided some level of unpaid care. This was slightly under both the regional and national averages, giving it a rating of 28th lowest ranking regionally³⁸.

Dacorum Health Profile – July 2010³⁹

- The health of people in Dacorum is generally better than the average for England. Deprivation levels are low and life expectancy for both men and women is longer than the England average.
- There are inequalities within Dacorum. For example, life expectancy for men living in the least deprived areas is over 6 years longer than for men living in the most deprived areas. For women, the difference in life expectancy within Dacorum is over 5 years.
- Over the past ten years, the rates of death from all causes and rates of early death from heart disease and stroke have improved and are better than the average for England. The rate of early death from cancer has also improved over the past ten years and is similar to the England average.
- More than 1 child in 12 in Reception year is classified as obese. The level of children being physically active in school is worse than the England average.
- It is estimated that almost 1 adult in 5 in Dacorum smokes, and almost one third of adults eat healthily. More than 1 adult in 5 is obese.
- Health priorities include reducing smoking prevalence, childhood and adult obesity, alcohol misuse and teenage pregnancies, increasing physical activity in children, falls prevention and tackling inequalities.

2.1.3 Trends

A notable trend within these three areas with regard to health indicators are that the proportion of people that describe themselves as being in good health is around 72%, thus approximately just under 30% of each of the area's population have classified themselves as suffering from a below average level of health.

It is not possible to predict the health trend in the district, if would be maintained or would deteriorate. However no evidence exists that with the continuation of current plans and policies, an enhancement in healthy lifestyle is likely.

³⁸ UK Government Census 2001

³⁹ Source: APHO and Department of Health. © Crown Copyright 2010'

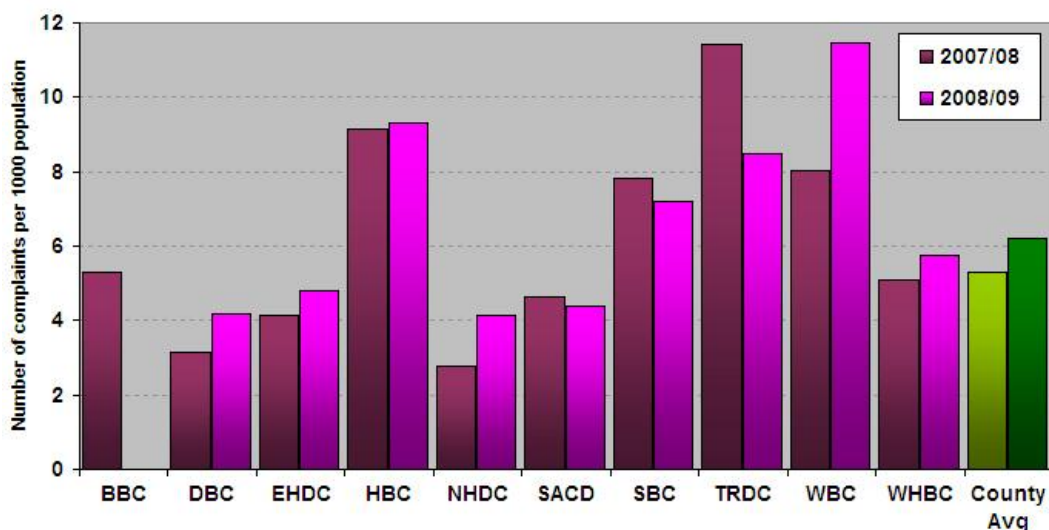
2.2 Noise

2.2.1 Relationship with other Plans and Programmes

There are a number of EU Directives in place which control noise from transport sources, for example from vehicles and outdoor machinery. EU Directive 2002/49/EC relating to the assessment and management of environmental noise – the Environmental Noise Directive – is the latest piece of European legislation. Its aim is to define a common approach across the European Union to avoid, prevent or reduce the harmful effects of environmental noise from road, rail and air traffic and industry. By 2007 strategic noise maps have to be prepared and by 2008 action plans have to be developed for how to reduce environmental noise where necessary. In a national context, PPG 24 'Noise' sets out how the planning system can be used to minimise the adverse impacts of noise and PPG 13 'Transport' aims to reduce the need for travel, possibly leading to a reduction of noise from transport.

2.2.2 Baseline Information

The numbers of noise complaints for the local authorities in Hertfordshire in 2007/8 and 2008/9 are shown in Figure 14.



Source: Hertfordshire councils November 2008 & 2009

Figure 14: Noise Complaints per 1,000 Population

Figure 15 illustrates the main categories of complaint made to Hertfordshire local councils in 2008/9, with domestic noise being the largest category by far.

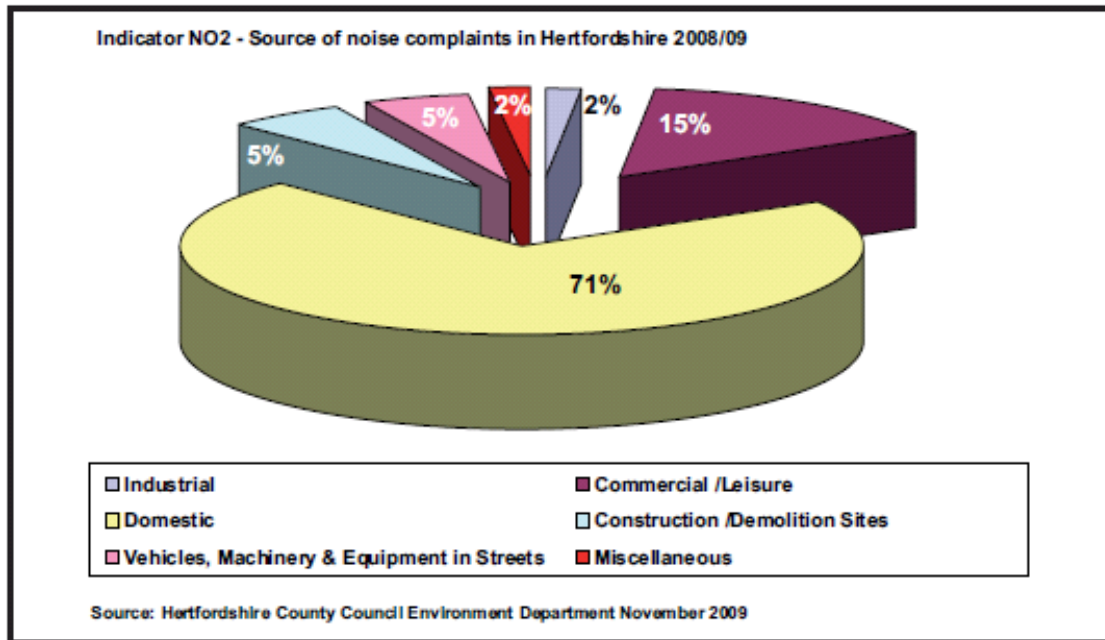


Figure 15: Source of Noise Complaints

The overall number of noise complaints received by councils in Hertfordshire rose in 2008/09, although the number of complaints about aircraft noise fell (Herts QofL 2009).

2.2.3 Trends

The number of noise complaints is increasing.

2.3 Population

2.3.1 Relationship with other Plans and Programmes

Population primarily relates to demographics, about which there are very few specific plans, policies or strategies. However, many other types of plans and policies will have secondary impacts on the population, e.g. housing strategy policies on accommodation for the elderly. Therefore, when taking into account effects on the SEA/SA topic of 'population', cross reference should be made to plans covered within plans and policies relating to housing, education, social deprivation, crime (safety), recreation, leisure and sports.

Objectives relating specifically to demographics (not attempting to alter them, but rather to adapt to changes in future demographics), may be found in documents focusing on sustainable development. An example can be seen in the EU Sustainable Development Strategy (2001), which includes an objective specifically on 'dealing with the economic and social implications of an ageing society'.

2.3.2 Baseline Information

The population of England as a whole is growing. This is due to people living longer, and the relocation of people into England from other parts of the UK, Europe and beyond. Implications will be a growing proportion of the elderly and a decreasing proportion of young people.

The total population in Hertfordshire has been recorded at approximately 1,033,977. Table 14 below shows growth rates in Watford, St Albans, Dacorum and Three Rivers.

Table 14: Population Growth rates (Source: Census 2001)

	2001 Census Population	1991 Census	1981 Census	Comparison of 2001 and 1991 Census
Hertfordshire	1033,977	975,829	950,760	6.0%
Watford	79,729	74,566	73,927	6.9%
St Albans	128,982	126,202	124,317	2.2%
Dacorum	137,807	132,240	128,565	4.2%
Three Rivers	82,843	78,457	77,755	5.6%

Table 15 below shows the estimates of resident population from the 2001 census. This estimate for Hertfordshire suggests a rise in population of 6% since the 1991 census.

Table 15: Population Growth by age group and gender (Source: Census 2001)⁴⁰

	Total	Male	Female	0-14	15-29	30-44	45-59	60-74	75-89	90+
Hertfordshire	1,033,977	505,059	528,918	201,880	182,951	248,799	196,909	130,090	67,093	6,255
2001		48.80%	51.20%	19.50%	17.70%	24.10%	19.00%	12.60%	6.50%	0.60%
1991	975,829	49.00%	51.00%	18.80%	21.80%	22.40%	17.40%	13.30%	5.90%	0.40%
Watford	79,726	39,227	40,499	15,476	16,586	20,405	13,453	8,696	4,604	506
2001		49.20%	50.80%	19.40%	20.80%	25.60%	16.90%	10.90%	5.80%	0.60%
1991	74,566	49.10%	50.90%	19.10%	25.00%	22.00%	15.80%	11.60%	6.10%	0.40%
St Albans	129,005	63,414	65,591	25,003	21,562	31,947	25,303	16,228	8,173	789
2001		49.20%	50.80%	19.40%	16.70%	24.80%	19.60%	12.60%	6.30%	0.60%
1991	126,202	49.10%	50.90%	18.30%	20.90%	23.10%	18.30%	13.00%	6.00%	0.40%
Dacorum	137,799	67,797	70,002	27,153	23,436	33,444	26,829	17,258	8,936	743
2001		49.20%	50.80%	19.70%	17.00%	24.30%	19.50%	12.50%	6.50%	0.50%
1991	132,240	49.10%	50.90%	19.30%	21.60%	23.20%	16.80%	13.30%	5.40%	0.40%
Three Rivers	82,848	40,062	42,786	16,047	13,374	19,002	16,813	10,958	6,014	327
2001		48.40%	51.60%	19.40%	16.10%	22.90%	20.30%	13.20%	7.30%	0.40%
1991	78,457	48.70%	51.30%	18.10%	19.80%	21.90%	18.30%	14.60%	6.90%	0.20%

Dacorum's population was estimated at 138,000 in mid 2003⁴¹. This saw an increase from the previous year which is forecast to continue at least until 2009. However, these past and predicted increases have been below those seen in Hertfordshire as a whole.

The population age structure is not significantly different from that of the regions. The Census 2001 data indicates that nearly 29,000 people were aged 0 to 15, over 99,000 were aged 17 to 74, and over 9,500 were aged 75 and over. The area has the highest number of people aged 85-89 out of all four areas, with 1,621 falling in to this category.

⁴⁰ 2001 census data from NHS website - [_____](#)

⁴¹ Dacorum Stats and Facts – Hertfordshire Observatory (December 2004)

The largest ethnic minority group within Dacorum is Asian, comprising of 2,828 people according to the 2001 Census. The number of people born outside of the EU numbered 6,442 (the 113th highest proportion out of 376, in England and Wales). The Census also revealed that 131,527 within Dacorum were ethnically white, making them largest grouping.

2.3.3 Trends

All of the areas have shown a population growth between the census of 1991 and 2001 according to statistics. The majority of the population in each of the areas are concentrated between the ages 25 and 39. The majority of the population in each of the four areas are white people; however the Asian population has shown the fastest and greatest rate of growth since the 1991 census in all sets of data.

2.4 Housing

2.4.1 Relationship with other Plans and Programmes

A home is one of the most basic human needs. New housing of the right type and in the right location can help facilitate social inclusion. Ensuring that there is provision to meet the variety of needs within the community and a choice of house types, size and affordability within sites can foster a sense of place.

The European Spatial Development Perspective (1999) establishes a number of common objectives and concepts adopted by EU member states that set the high level framework for national and hence regional/local spatial plans. Economic and social cohesion are one of the main goals, and housing plays an important role in the achievement of that goal. The main national guidance relating to the provision of new housing on a regional basis is PPG3 'Housing'. This guidance emphasises the importance of mixed use developments, ensuring integration of industrial, commercial, and residential property through spatial and transport plans, in order to minimise dependency on road transport. This land use integration will also go some way toward achieving the social deprivation and accessibility objectives within the plan.

At a regional level, the Sustainable Communities: Building for the Future – Communities Plan (2003), informs the conversion of RPGs into RSSs incorporating increased targets for brown field development and affordable housing. These aims were incorporated into the East of England Plan. However in July 2010, the Coalition Government revoked Regional Spatial Strategies, including the East of England Plan. At the same time, local planning authorities were made responsible for establishing the right level of housing provision in their area and identifying a 15 year supply of housing land.

2.4.2 Baseline Information

Additional housing is needed in the region. Access to housing is an acute problem in parts the area and many council homes are in need of significant repair. Government household projections based on the 2001 Census suggest that housing demand will be around 17% higher than was estimated by the 1996 Based Household Projections, although at the Regional level they are broadly in line with recent build rates.

Dacorum rates well in the number of Local Authority homes that are unfit for dwelling with only 6% at the start of 2003/4, which is significantly less than the regional average of 27%⁴².

Within Dacorum, the number of owner occupied houses at the 2001 Census was below the East of England average by 4.02%. 70.4% of households in this area are owner

⁴² ODPM BVPI 2003/4

occupied, this translates to 39,361 households which places it 38 out of 48 in the regional rankings⁴³.

The dwelling stock for all the Hertfordshire local authorities is shown in Figure 16.

Hertfordshire Dwelling Stock by District & Tenure				
	Private Sector (non RSL)	Local Authority	Registered Social Landlord	Total Stock
BBC	32,952	503	4,936	38,391
DBC	46,558	10,739	2,376	59,673
EHDC	49,235	57	7,825	57,117
HBC	32,971	230	7,329	40,530
NHDC	43,284	105	10,370	53,759
SACD	49,512	5,464	1,773	56,749
SBC	24,375	8,388	1,905	34,668
TRDC	31,000	22	4,903	35,925
WBC	29,835	109	5,499	35,443
WHBC	32,440	9,378	3,203	45,021
County	372,162	34,995	50,119	457,276

Source: CLG Housing Strategy Statistical Appendix 2008

Figure 16: Hertfordshire Dwelling Stock

The price of housing compared to earnings is an issue in all four local authorities (Figure 17) with the ratios having increased steadily from 2000 through to 2008, although levels did fall back in 2009⁴⁴.

	2000	2001	2002	2003	2004 ^R	2005 ^R	2006 ^R	2007 ^R	2008 ^R	2009 ^R
Hertfordshire	5.99	6.40	7.63	8.39	9.07	9.47	9.39	10.00	10.08	9.02
Broxbourne	5.71	6.32	8.60	8.93	10.81	10.29	10.33	10.03	9.16	9.52
Dacorum	6.05	6.45	7.38	8.57	9.15	9.02	9.10	9.52	9.71	8.72
East Hertfordshire	6.48	6.79	7.80	8.87	9.70	9.62	10.58	10.48	11.36	9.28
Hertsmere	6.83	7.64	8.97	11.98	10.42	12.77	12.10	13.10	12.72	10.56
North Hertfordshire	5.60	5.61	6.99	8.35	8.56	8.30	9.10	9.27	9.50	8.92
St. Albans	8.05	8.33	9.60	10.44	11.38	12.11	11.90	13.40	12.90	11.55
Stevenage	4.70	5.13	6.53	7.13	7.66	8.14	7.38	7.67	7.61	6.87
Three Rivers	6.98	6.97	7.69	7.71	8.29	7.92	8.16	9.43	9.77	8.34
Watford	5.79	6.41	7.62	7.89	9.27	9.37	8.99	11.72	10.77	8.70
Welwyn Hatfield	5.75	6.33	6.95	8.03	8.65	8.80	9.72	8.75	9.89	8.50

Figure 17: Ratio of lower quartile house price to lower quartile earnings by district⁴⁴

The percentage of homes built on previously developed land (Brownfield sites) within Dacorum stood at 96% in 2008/9 (Herts QofL 2009).

Figures for affordable dwellings completed as a percentage of all new housing completions are shown in Table 16. In Dacorum there was a downward trend in the proportion of affordable housing completions between 2002/3 and 2004/5.

⁴³ UK Government Census 2001

⁴⁴ <http://www.communities.gov.uk/housing/housingresearch/housingstatistics/>

Table 16: Affordable housing completions (Source Audit Commission Local Area Profiles, 2010)

Local Authority	Affordable dwellings completed as a percentage of all new housing completions		
	2002/3	2003/4	2004/5
Dacorum	34.62	14.38	11.9
St Albans	17.18	33.44	55.7
Three Rivers	42	37.76	22
Watford	21.3	36.43	33.64

2.4.3 Trends

House prices compared to earnings continue to rise. Provision of affordable housing decreased between 2002/3 and 2004/5.

2.5 Crime

2.5.1 Relationship with other Plans and Programmes

Crime is to some extent covered intrinsically in plans and policies that aim to increase social cohesion. Hence plans and policies tackling social inclusion and accessibility will all be relevant. A good example of this can be seen in the Regional Social Strategy: A Strategy to Achieve a Fair and Inclusive Society in the East of England. Its strategic objectives include 'to develop social networks, community assets and promote community cohesion', which when tackled would alleviate some of the root causes of crime.

This is seen again at a higher level in the European Spatial Development Perspective (1999) which calls for economic and social cohesion. Objectives and aims relating more directly to crime should be present in community strategies at the district and borough level.

2.5.2 Baseline Information

Crime continued to fall in the county in 2008/09 and Hertfordshire ended the year at its lowest level since 2002 making the county one of the safest in England. The number of crimes reduced by over 5% – equating to more than 4,000 fewer victims. Home burglary is a concern however; having been at its lowest level in 2006/07 it has increased in the past year.

Domestic burglaries per 1000 households:	2006/7: 8.39	2005/2006: 9.4
Violent offences per 1000 population:	2006/7: 15.58	2005/6: 14.03
Theft of a vehicle per 1000 population:	2006/7: 2.26	2005/6: 2.62
Sexual offences per 1000 population:	2006/7: 0.87	2005/6: 0.70

2.5.3 Trends

In general crime levels continue to fall although certain types of crime have not shown this positive trend.

2.6 Accessibility

2.6.1 Relationship with other Plans and Programmes

Basic facilities are an important part of our communities. They provide essential services such as food and medical provisions. They also contribute to the sense of place in communities and provide a focal point for community interactions and provide employment, often for locally based people. Limiting access and availability to these services can make people feel socially excluded and reduce interactions in the community.

The European Spatial Development Perspective (1999) establish a number of common objectives and concepts adopted by EU member states that set the high level framework for national (and hence regional/local spatial plans). Economic and social cohesion are one of the main goals, and accessibility (to services and employment) plays an important role in the achievement of that goal. The emphasis on accessibility is continued at this high level by the EU Sustainable Development Strategy. The strategy refers to accessibility directly through 'improving transport systems and land use management', and indirectly through 'dealing with the economic and social implications of an ageing society' (the latter in terms of easy access to amenities including hospitals, in which public transport and mixed use planning plays a major role).

PPG13 'Transport' aims to encourage public transport use, walking and cycling, through managing the pattern of urban growth (and other travel generating development). This will need to be addressed directly within the LDF and should contribute towards the European goals of increasing accessibility to amenities and services for all social and age groups.

The Hertfordshire Local Transport Plan 2 (LTP 2) objectives includes objectives on developing transport systems that provide access to employment, shopping, education, leisure and health facilities for all (including those without a car and those with impaired mobility). The LDF should take account of these transport objectives, and attempt to provide complimentary land use planning objectives to lie alongside them, e.g. mixed use planning, siting developments next to existing public transport facilities.

2.6.2 Baseline Information

Hertfordshire's Local Transport Plan (2006/7) highlights that:

- Hertfordshire has more than 1900 miles of public right of ways, providing access to services, facilities and recreational walks and cycle paths;
- The number of people killed and seriously injured in road accidents, and children killed and seriously injured have reduced by 25% (2000-2003), and the number of slight casualties by 13%.
- The County Council has seen a trend of declining bus use in recent years, which it is seeking to reverse through the Bus, Rail and Intalink Strategies.

BPVI indicators provide the following information on a regional level:

The percentage of principle roads in the region, in need of repair stood at 8.7% in 2003/4, slightly lower than the English average of 9.8%;

Local buses in the region have less patronage than other regions, at just over 14 million passenger journeys per year compared to an average per region in England of over 23.5 million (in 2003/4);

The percentage length of footpaths and other rights of way which are easy to use in the region stood at 79.3%, significantly higher than the England average of 68.9%; and,

The proportion of pedestrian crossings with disabled facilities within the region is similar to the English average, at 84.9% and 82.4% respectively.

In Dacorum 61.9% of local authority buildings were classified as suitable for and accessible by disabled people, compared with an average of 47.1% in the region and 43.8% in England. Although this shows an increase from the previous year, it also illustrates a slowing trend in the increase, with a greater gain being recognised between 2001/2 and 2002/3.

2.6.3 Trends

Dacorum has a higher proportion of buildings that are classified as suitable for and accessible by disabled people than the regional average.

Building access for the disabled may be advanced through the Disabled Discriminatory Act in most buildings however given less public transport patronage accessibility to key services is likely to remain as current baseline in the future, or may worsen for people with no car access, including people with disabilities. Therefore in a business as usual scenario accessibility issues are likely to worsen in the medium to the long term.

2.7 Social Deprivation

2.7.1 Relationship with other Plans and Programmes

The European Spatial Development Perspective (1999) establish a number of common objectives and concepts adopted by EU member states that set the high level framework for national (and hence regional/local spatial plans). Economic and social cohesion are one of the main goals, and as such, place tackling pockets of social deprivation high on the agenda.

The main national guidance relevant to social deprivation is: PPG3 'Housing', which emphasises the importance of mixed use developments, and ensuring integration of industrial, commercial, and residential property through spatial and transport plans. This, alongside PPG13 'Transport', aims to improve access to amenities, services, and employment opportunities for all social and age groups.

England's Rural Strategy (2004) includes as one of its three key policies: 'Social Justice for All – tackling social exclusion wherever it occurs and providing fair access to services and opportunities for all rural people'. Despite its relatively small spatial scale, Dacorum's LDF will need to take into account rural issues.

2.7.2 Baseline Information

The geographical spread of deprivation across Hertfordshire can be gauged by using the Government's Indices of Deprivation 2004 (ID2004). These rely on Census and administrative data from 2001 for the Census's lower-layer Super Output Areas (SOAs). There are 32,482 of these in England, as opposed to the 8,414 wards used for the Indices of Deprivation 2000. In Hertfordshire there were estimated to be 82,559 people in the income deprived category. This represents around 8% of residents. For employment deprivation the number is 31,841. Hertfordshire has over 15% of the total numbers of income deprived in the region and over 14% of the employment deprived. As Hertfordshire has around 19% of the region's residents, it can be concluded that these forms of deprivation are somewhat less prevalent in Hertfordshire than in the region as a whole⁴⁵.

⁴⁵ Hertfordshire Local Economy Assessment (2004)

Dacorum ranks 288th out of 354 local authority areas in England on the 2007 Index of Multiple Deprivation rankings (A rank of 1 being the most deprived) most deprived local authority area (out of 354) in England on the overall Index of Multiple Deprivation. This compares to a ranking of 306th out of 354 in 2004 indicating that in relation to other local authorities in England Dacorum has become slightly more 'deprived'.

This ranks alongside Three Rivers which is 287 (308 in 2004), but below St Albans which ranks 317 (333 in 2004), and above Watford ranked the 203 (223 in 2004) most deprived area in England.

There are pockets of deprivation within Dacorum. The range of deprivation score⁴⁶ in Dacorum is 1.74 to 25.49; with Berkhamsted Central as the least deprived, and Highfield as the most deprived. None of the wards in Dacorum are in the 25% most deprived nationally. Over half (19/28) of all wards are in the 25% least deprived nationally.

The percentage of economically active people from ethnic minorities in the Dacorum stands at 4.6%, behind the regional average of 5.2% and English average of 5.8% (ODPM BVPI, 2003-4). This shows no change from 2002-3 levels. Similarly, the percentage of economically active disabled people in Dacorum in 2003-4 stood at 10%, behind the regional average of 11% and English average of 13.3%. This shows no change from 2002-3, and a fall of 4.8% from 2001/2 levels (a percentage change of nearly 50%).

2.7.3 Trends

St Albans, Dacorum and Three Rivers all rank around 300 in the indices, St Albans being the least deprived out of the four areas according to these indices.

2.8 Recreation, Sport and Leisure

2.8.1 Relationship with other Plans and Programmes

The way in which green spaces are treated within land-use development documents are vital to an areas recreation, leisure and sports capacity. National guidance exists in the form of PPG17 'Planning for Open Space, Sport, and Recreation'. This guidance acknowledges that the recreational quality of opens spaces can be eroded by insensitive development, and therefore local authorities should weigh up any benefits being offered to the community against the loss of open space that will occur (and the benefits that it too provides to the local community).

All plans and policies that relate to the improving of human health through exercise are relevant to this section. This strong link between recreation/sport and health is illustrated within the Health White Paper (2004), Choosing Health: Making Healthier Choices Easier, with one of its priorities being 'increasing exercise'. At a more regional level, the Hertfordshire Sustainability Guide (2003) aims to 'promote healthier lifestyles' alongside, 'protecting, providing, and improving open spaces'.

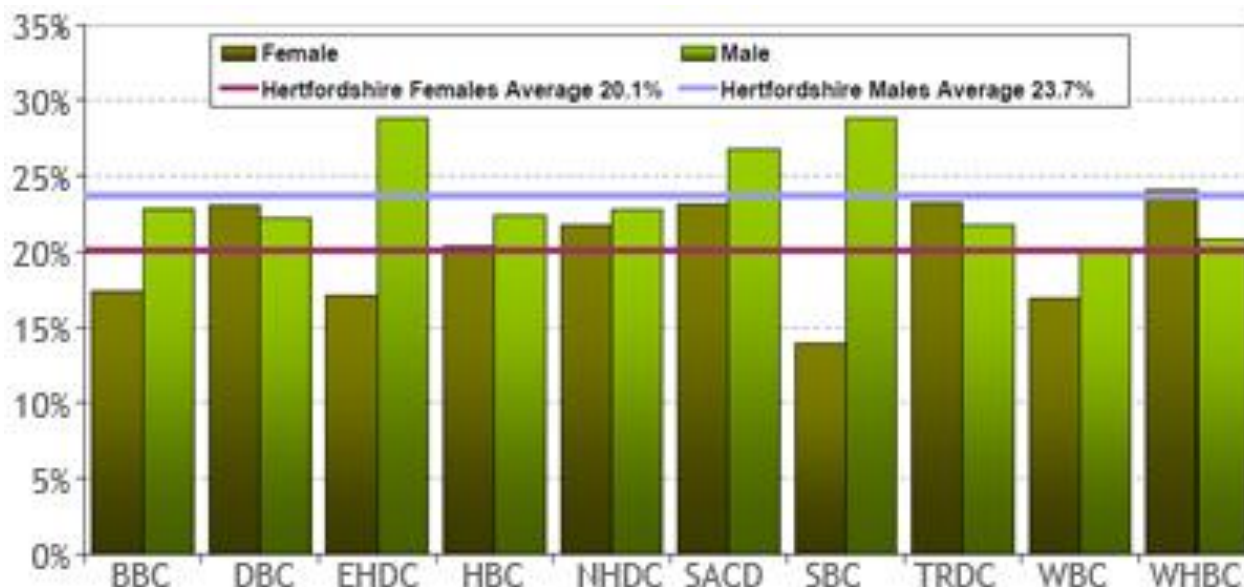
2.8.2 Baseline Information

The number of visits to a museum per 1,000 population in Dacorum has no recorded value in the ODPM BVPI data, which is due to the absence of a museum service in the area. The region as a whole, stood at 707 visits in 2003/4, which was significantly less than the English average of 976⁴⁷. Dacorum has 9 sports centres in its area⁴⁸.

⁴⁷ ODPM BVPI 2003/4

⁴⁸ <http://www.dacorum.gov.uk/about/sportscentres.aspx>

In Dacorum the number of adults, both male and female, taking part in 30 minutes moderate activity at least three days per week is above the average for the rest of Hertfordshire (Figure 18).



Source: The Active People Survey 2007-08 via East & North Hertfordshire PCT November 2009

Figure 18: Adults taking part in 30 minutes moderate activity at least three days per week, 2007/08 (Source: Herts QofL 2009)

2.8.3 Trends

Trend information not available.

2.9 Disability Allowance

2.9.1 Relationship with other Plans and Programmes

The Disability Discrimination Act came into force in October 2004. The relevant quotes from the 175-page Code of Practice are:

2.2 (p7): "The Disability Discrimination Act makes it unlawful for a service provider to discriminate against a disabled person by refusing to provide any service which it provides to members of the public."; and,

4.7 (p39): "From 1st October 1999 a service provider has to take reasonable steps to change a practice which makes it unreasonably difficult for disabled people to make use of its services."

This will have consequences for many types of commercial and industrial developments, and land-use development plans will need to take into account these requirements at their most basic level.

2.9.2 Baseline Information

In August 2009 4,480 people in Dacorum received Disability Living Allowance, up from 3,470 in 2002⁴⁹.

⁴⁹ www.neighbourhood.statistics.gov.uk

In August 2003, 2,770 people in Dacorum received attendance allowance, which represented 13% of all those people aged 65 and over living in the area; this compared with 14% in England and Wales. In August 2003, 3,305 people in Dacorum between the ages of 16 and 65 claimed Incapacity Benefit or Severe Disability Allowance because they had been unable to work for at least 28 consecutive weeks because of illness or disability. Of these people, 11% were under the age of 30.

2.9.3 Trends

The number of people receiving disability allowance increased steadily between 2002 and 2009. Trend information was not obtained for the other factors.

2.10 Healthcare

2.10.1 Relationship with other Plans and Programmes

Health is a universal basic human need. High levels of public health lead to fitter, happier and healthier people. Health services are nationally high on citizens' list of political priorities. Other benefits include employment provision and contribution to the local economy, training and research opportunities, reduced burden on social services and public finances. Addressing the effects to public health, and, dealing with the social and economic implications of an ageing society, are both key objectives of the EU Sustainable Development Strategy (2001), and will both have implications on future healthcare provision.

2.10.2 Baseline Information

Hertfordshire have pockets of deprivation in certain wards. Hertfordshire but appears to be one of the more healthy counties of England, with life expectancy of 77 years for men and 81 years for women. Table 17 shows the life expectancy in the four areas.

Table 17: Life expectancy 2001 (Source: Health Profiles of Hertfordshire⁵⁰)

	Life expectancy		Rank within Hertfordshire		Rank within UK 1=Best	
	Male	Female	Male	Female	Male	Female
Watford	75.02	79.29	10	9	249	318
St Albans	78.12	81.65	2	2	9	46
Dacorum	76.55	80.99	6	5	111	114
Three Rivers	78.72	82.66	1	1	2	7

9% of the resident population in Dacorum provided unpaid care compared to 10% in England and Wales. Of the people providing unpaid care, 16% gave 50 hours or more per week; this compared with 21% in England and Wales.

Healthcare provision

The Dacorum Infrastructure Study Social Infrastructure Assessment (June 2010) identified the following issues in relation to provision of education facilities in the Borough. The study considered two housing growth scenarios for the period 2009-2031; Low Growth (8,942 dwellings); and High Growth (15,742 dwellings). The study provided the following conclusions.

⁵⁰ Health Profiles of Hertfordshire -

Primary Care Services

There are 29 GP surgeries with 100 GP staff which serve Dacorum and surrounding area. The practices are clustered around the densely populated areas in Dacorum, e.g. Hemel Hempstead, Berkhamsted and Tring, with a few located in smaller settlements nearer the rural areas in the borough. Whilst some surgeries are more crowded than the Hertfordshire average, across Dacorum as a whole there is considerable capacity within existing practices.

An assessment of future new demand associated with growth in Dacorum indicates that up to 13.6 new whole time equivalent (WTE) GPs and 1,164 sq m will be required to 2031 under the low growth scenario, and up to 23.9 new GPs and 2,048 sq m will be required to 2031 under the high growth scenario. A large proportion of this demand will be at Hemel Hempstead – even under the low growth scenario there is unlikely to be sufficient demand for new services outside of Hemel Hempstead to justify new build facilities.

Secondary Health Care

There are four major acute hospitals in Hertfordshire. Residents can also access acute services at hospitals outside Hertfordshire. Nearly 98% of Hertfordshire residents, based on modelled travel times, live within 30 minutes by car from an acute hospital.

Hemel Hempstead General Hospital is the only hospital in Dacorum. A major redevelopment of Hemel Hempstead local general hospital is underway. Acute services previously provided there are moving to Watford. The redevelopment includes a new urgent care centre and outpatient, therapy and diagnostics. Completion is planned for the end of 2013. Given the pattern of Dacorum's housing and population growth under both the low and high growth scenarios, it is likely that the greatest future need will be in Hemel Hempstead. In this respect, the location of new Local General Hospital will fit the location of new demand.

2.10.3 Trends

All four areas either provided care to a level of or just below the level recorded for England and Wales.

2.11 Education

2.11.1 Relationship with other Plans and Programmes

The European Spatial Development Perspective (1999) establish a number of common objectives and concepts adopted by EU member states that set the high level framework for national (and hence regional/local spatial plans). Economic and social cohesion are one of the main goals, and education plays an important role in the achievement of that goal.

At a regional level, the Regional Social Strategy (2004), includes strategic objectives covering: improving life chances of children from disadvantaged families, and improving the life chances of adults through learning and skills development. These objectives can be tackled through the LDF by increasing accessibility not only to employment opportunities but also to education facilities.

2.11.2 Baseline Information

The proportion of people of working age qualified to GCSE A level equivalent or higher in the East of England was 47.6% in 2003, this was below the UK average of 50 per cent. The East of England had the lowest percentage of higher education students who were studying in their own area, 41% in 2002/03. In Hertfordshire the proportion of pupils

achieving at least level 4 at Key Stage 2 (KS2) (the anticipated level of attainment for pupils aged 11 in their final year at primary school) changed from 75% in 1999 to 78% in 2004 for Mathematics and from 78% to 83% in respect of English. There are approximately 45,893 students in Hertfordshire, 19,061 of which are economically active. Table 18 below shows the percentage of people aged 16-74 that have no qualifications in the respective areas and also highlights the figure for the East of England for comparison.

Table 18: Percentage of people aged 16-74 that have no qualifications

	East of England	Watford	St Albans	Dacorum	Three Rivers
People aged 16-74 with no qualifications	27.9%	23.7%	17%	24%	21.8%

The proportion (%) of all 18-24 yr olds in full time education or employment as of January 2001 in Dacorum was 88.3%. The percentage of 15 year old pupils in schools maintained by local authority achieving 5+ GCSEs, grades A*-C in Dacorum was 44.8% in 2000/1⁵¹, compared to an English average of 45.3% and a regional average of 50.7%.

The Dacorum Infrastructure Study Social Infrastructure Assessment (June 2010) identified the following issues in relation to provision of education facilities in the Borough. The study considered two housing growth scenarios for the period 2009-2031; Low Growth (8,942 dwellings); and High Growth (15,742 dwellings). The study provided the following conclusions.

Early Years

The forecast demand / supply gap (2012/13) for primary schools in Hertfordshire shows that Hemel Hempstead and Berkhamsted are areas of potential deficit.

A requirement for an additional 26.5 nursery classes has been identified under the low growth scenario. 18.5 of these nursery classes are in Hemel Hempstead (though this includes 4 on reserve sites) with particular need in the North and North East Primary Planning Areas. There is a marked requirement (4 new nursery classes) in Berkhamsted also. In Bovingdon and Markyate there is no requirement for new classes to accommodate growth. Under the high scenario, a requirement for an additional 37.5 nursery classes has been identified. 29.5 of these classes are in Hemel Hempstead (including 4 on reserve sites).

Primary Education

The forecast demand / supply gap (2012/13) for primary schools in Hertfordshire shows that Hemel Hempstead and Berkhamsted are areas of potential deficit.

Over the whole of Dacorum, a requirement for an additional 26.5 FE (form entry) is identified under the low growth scenario, of which 6.5 FE could be accommodated on existing sites and 20 FE would require new sites. Assuming new 2 FE schools require a new 2.5 ha site, the requirement could be 25 ha.

Under the high scenario, a requirement for an additional 37.5 FE has been identified, of which 7.5 FE could be accommodated on existing sites and 30 FE would require new sites. 29.5 of these FE are in Hemel Hempstead. Assuming new 2 FE schools require a new 2.5 ha site, the requirement could be 37.5 ha.

The assessment of demand reflects variations in the current baseline of provision and in projected population change across Dacorum. The majority of new schools will be required in Hemel Hempstead, with particular need in the North and North East PPAs.

⁵¹ Quality of Life Indicators, Hertfordshire Observatory

There is a marked requirement (4 new FEs) in Berkhamsted also. In contrast, no new schools are required in Bovingdon or Markyate.

Secondary Education

As of 2010 there was spare capacity of 1,598 places (14%) across the 10 maintained secondary schools in the borough of Dacorum.

There are 10 secondary schools in Dacorum, all of which have sixth forms. Currently there is spare capacity of approximately 14% borough-wide. HCC forecasts to 2012/13 identify Berkhamsted as an area of secondary school deficiency.

Under the low scenario, it is estimated that 10 FEs are required to 2031 - 8 FE on a new site in Hemel Hempstead and 2 FE at Tring through either expansion of the existing school, or through relocation and expansion of the existing school. One new site at Hemel Hempstead would require 14 ha. Under the high scenario, it is estimated that 16 FEs are required to 2031 - 16 FE on two new sites in Hemel Hempstead and 2 FE at Tring through either expansion of the existing school or through relocation and expansion of the existing school. Two new sites at Hemel Hempstead would require 14 ha each totalling 28 ha.

2.11.3 Trends

Three of the areas had relatively high percentages of the 18 to 24 year old in full time education or employment, however interestingly; the value for Watford was unknown according to data recorded at the Hertfordshire Observatory. Dacorum is the only area from the four to score below the English average for the percentage of 15 year old pupils in schools maintained by the local authority, that are achieving 5 or more GCSE's grade A* to C.

3 Economic Factors

3.1 Economic Activity

3.1.1 Relationship with other Plans and Programmes

The UK Government's approach to sustainable development recognises that a better quality of life for all includes economic growth and employment as well as more widely available goods and services. This requires the creation of stable and competitive economy. Over the past three decades, UK output and inflation has been highly volatile. Economic instability has significant costs, making it difficult for individuals and firms to plan and invest, with damaging effects on long-term economic growth. It involves social costs that often fall heavily on people on lower incomes. The sensible response to this kind of economic uncertainty and turbulence is an emphasis on resilience - that is, on enabling the economy to cope with a range of possible shocks and changes. Economic resilience entails maintaining portfolios of diverse options and solutions rather than aiming for a single optimum, and maintaining the capacity of smaller and simpler subsystems to perform basic tasks if larger and more complex systems fail.

Relevant national guidance exists through a number of Planning Policy Guidance Notes. PPS4 'Planning for Sustainable Economic Growth' provides guidance on the provision in planning for economic development alongside respect for the environment. This document also promotes a 'town centre first' sequential approach to development with the aim of creating thriving town centres that provide a range of facilities for local people. It also discusses enhancement of the quality of life and the environment in rural areas.

Tourism has been and increasingly will be an important component of the local economy. PPG21 related to tourism outlines the economic significance of tourism along with its

potential environmental impacts. The combination of these two factors makes it an important consideration for any land-use plans.

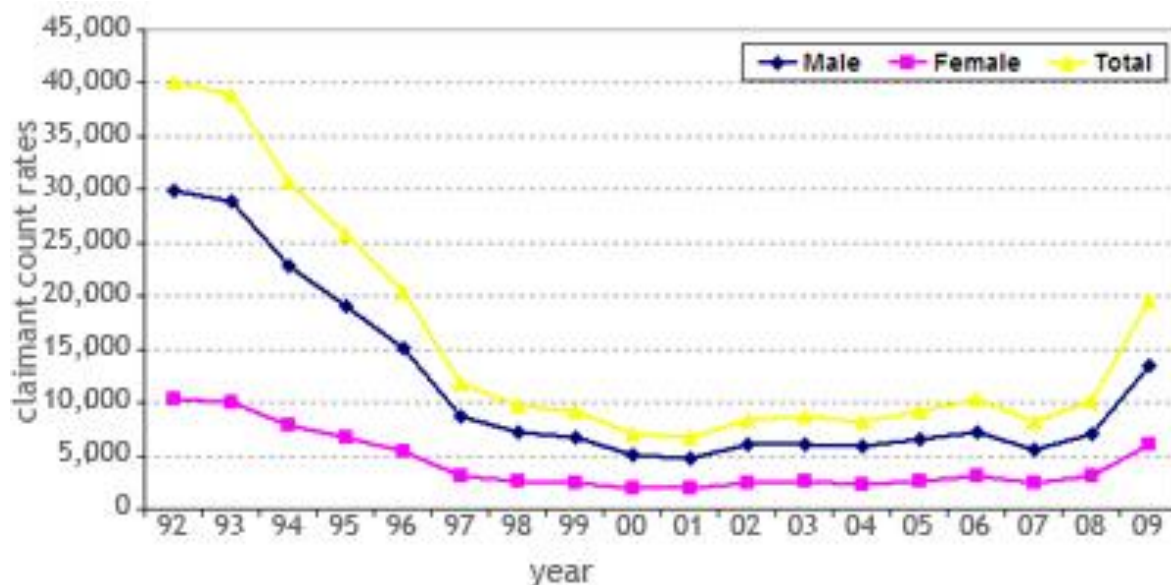
The importance of economic growth as a key pillar within sustainable development is illustrated at the regional level by the Sustainable Development Framework for the East of England (2001). One of the Frameworks key objectives is for the achievement of growth in a balanced way.

A Shared Vision: The Regional Economic Strategy of the East of England (2004), expresses a vision of creating a leading economy, through objectives pertaining to improved skills base, innovation and entrepreneurship, efficient resource use, and tackling social exclusion. This is the key regional document relating to the economic activity. At a more local level, the Economic Development Strategy for Hertfordshire (2000-2005) sets out economic priorities up to 2005, including developing skills and promoting social inclusion. This Strategy embodies a large part of the Counties Employment Strategy and Workforce Development Plan. Hertfordshire's important rural economy is addressed through 'Rural Hertfordshire - and agenda for action 2001' (2005).

At a county level the Hertfordshire Economic Development Strategy (2009) outlines how the county will build on its strengths and opportunities, and meet the challenges it faces. The five key economic objectives are: creating a vibrant, low carbon economy; stimulating enterprise, innovation and inward investment; developing a well-skilled workforce; providing quality locations and infrastructure; and creating vibrant towns and vibrant communities.

3.1.2 Baseline Information

In Hertfordshire in 2008 estimated Gross Value Added shrunk by 0.1%, a slightly worse performance than that of the East of England, where it grew by 0.2%, and of the UK, where the growth was 0.9%. The clearest indication of the recession in Hertfordshire has been the rise in the number of people claiming benefits (see Figure 19). In October 2009 the county's claimant count was 19,565. This represents a 93% increase on a year previously which in turn was 24% higher than in October 2007 (Herts QofL 2009).



Source: NOMIS - Job Seekers Allowance (JSA) claimant count November / December 2009)

Figure 19: Hertfordshire Job Seekers Allowance claimant count

Employment rates in the region remain high. The region however needs to do better in its progress towards National Learning Targets. In addition a significantly lower proportion of employees in the Region receive job-related training than the UK average. As in the rest of the country, women are also receiving less job-related training than men. Table 19 below shows the percentage of economic activity levels for all four authorities and also the figures for the county as a whole to enable comparison and identify targets at a local level.

Table 19: Economic Activity⁵²

	% males (16-64)				
	Hertfordshire	Watford	St Albans	Dacorum	Three Rivers
Economically Active	89.80%	90.70%	87.60%	90.20%	87.90%
Economically Inactive	10.20%	9.3	12.40%	9.80%	12.10%
Students (economically active or inactive)	5.60%	5.2	6.80%	5.40%	6.60%
	% females (16-59)				
	Hertfordshire	Watford	St Albans	Dacorum	Three Rivers
Economically Active	70.40%	72.60%	70.20%	71.10%	67.60%
Economically Inactive	29.60%	27.40%	29.80%	28.90%	32.40%
Students (economically active or inactive)	9.20%	5.60%	7.80%	5.90%	7.20%

Table 20 shows the percentage of long term unemployment that prevails in all four authorities.

Table 20: Long term unemployment (2005)

	% males (16-74)				
	Herts	Watford	St Albans	Dacorum	Three Rivers
Long Term Unemployed	22.41%	25.60%	18.35%	20.35%	25.44%
	% females (16-74)				
	Herts	Watford	St Albans	Dacorum	Three Rivers
Long Term Unemployed	26.92%	24.34%	25.43%	24.10%	26.69%

Table 21 shows income support claimants in Hertfordshire and then Watford, St Albans, Dacorum and Three Rivers.

Table 21: Income support claimants (2005)

	Total	%	Pensioners (MIG ⁵³)	Disabled	Lone Parents	Other
Hertfordshire	44,550	100	21,510	10,525	10,430	2,085
Watford	3,820	8.6	940	940	920	225

⁵² National Statistics -

⁵³ Minimum Income Guarantee

St Albans	4,265	9.6	2,020	1,150	895	200
Dacorum	5,765	13	2,795	1,385	1,340	245
Three Rivers	3,215	7.2	1,635	665	770	145

Hertfordshire's economy underperformed during the 2000s and the current recession has seen it slow down further⁵⁴.

The Area Profile for Dacorum⁵⁵ (February 2010) identified the following key points:

- The Business Density and Business Start Ups are in line with national and regional trends. However there are higher than average Employment levels and concentration of Directors living within Dacorum and a lower level of Business Closures.
- The dominant sectors are Retail, Construction and Real Estate & Business the later is significantly over-represented compared to regional trends. Specific clusters over-represented within Dacorum as compared with national figures include Technology, Creative Industries and Business Support Services.
- 85% of businesses have fewer than 10 employees but this is consistent with national and regional trends. Dacorum has only 2 corporate companies which is below the National, Regional & Sub-Regional average, employing 4.6% of the work force.
- Business growth within Dacorum (55.8%) is significant against national and regional trends but consistent with sub-regional levels.
- The wards that have a high concentration of business activity include Hemel Hempstead Central, Adeyfield East, Berkhamstead East, Tring West, Apsley and Bovingdon; Flaunden & Chipperfield.

3.2 Employment

3.2.1 Relationship with other Plans and Programmes

See relevant section under "Economic Activity".

3.2.2 Baseline Information

Since October 2007 the claimant count has increased markedly in all districts (Herts QofL 2009).

The claimant count for Hertfordshire at January 2010 was 20,303, a proportion of 3.0%. Over the last year the number of claimants in Hertfordshire increased by 6,080 (42.8%).

The unemployment claimant count for Dacorum⁵⁶ in April 2010 was 2,726 (3.2%) compared to 1,467 (1.7%) in October 2005. This was above the county average of 3.0% but below the region as a whole (3.4%). Of all businesses based in Hertfordshire, 13.7% were located in Dacorum. For 'Qualifications' within Dacorum, see 'Education' section.

Data taken from the Hertfordshire Observatory shows that the proportion of people who qualify as being of working age who are in employment has fallen over the time period between February 2001 and February 2003, from 83.6% to 76.6%.

⁵⁴ Hertfordshire Economic Development Strategy 2009-2021 (Hertfordshire Works, 2010)

⁵⁵ Market Measures – Dacorum Area Profile (February 2010)

⁵⁶ Hertfordshire Quarterly Unemployment Bulletin, April 2010

3.2.3 Trends

There has been an increasing trend in the unemployment claimant count figures in Dacorum. More recently, figures seem to be rising.

3.3 Economic Footprint

3.3.1 Relationship with other Plans and Programmes

See relevant section under "Economic Activity".

3.3.2 Baseline Information

Hertfordshire accounts for 21% of Gross Value Added (GVA) growth in the East of England, and just over 2% of UK GVA. Over the period 2003-2009, GVA growth in the county is expected to average 3% pa, faster than the average for the East of England (2¾% pa) and UK (2½% pa). As in the rest of the UK, growth over this period is expected to be fuelled by services, with growth in manufacturing only averaging 1¼% pa, which is slower than the growth expected in manufacturing in the East of England (3% pa) and UK (2¾% pa) as a whole.

Employment growth in the county is expected to be driven by financial & business services, at 2¼% pa over 2003-2009, which is faster than the growth expected in the East of England (1¾% pa) and UK (1½% pa) over the same period.

The Governments Index of Deprivation (2004) gives information on the numbers considered income deprived and employment deprived. The actual numbers of people in the income deprived and employment deprived⁵⁷ categories, on which these indices are based, are reported as the 'Income Scale' and the 'Employment Scale'. (using mid 2001 estimates). An analysis of the results for the four areas was included in the Hertfordshire Local Economy Assessment (2004):

The Hertfordshire Local Economy Assessment 2004, reveals that Dacorum accounts for around 14% of Hertfordshire's GVA. From 2003 to 2009, GVA growth in Dacorum is expected to exceed that of the rest of the county (with growth at 3.5% per annum as opposed to the 3% expected for the rest of Hertfordshire). It is proposed that this will be driven by services. The Hertfordshire Local Economy Assessment 2004 revealed that banking, finance, and insurance contribute the largest share of business units in Dacorum.

The Employment Scale showed that the Borough of Dacorum had 4,044 employment deprived people (4.8% of working age population) – giving it a rating of 7th amongst the ten districts in Hertfordshire (10 being most deprived). The Income Scale indicates that Dacorum had 10,801 people affected by income deprivation (7.8% of resident population) – giving it a rating of 6th amongst the ten districts in Hertfordshire. The Employment Scale showed that Dacorum had 4,044 employment deprived people (4.8% of working age population) – giving the borough a rating of 7th amongst the ten districts in Hertfordshire.

3.3.3 Trends

The four areas contribute 11% as a mean average towards Hertfordshire's GVA, with Dacorum holding the largest proportion out of the four with 14% contributions. They are all experiencing positive growth with regards to this GVA indicator.

⁵⁷ A person is defined as employment deprived if they want to work but are excluded from the labour market through unemployment, sickness or disability.

In a business as usual scenario, given the current economic climate, without strong employment, retail and other economic development options the trend is likely to move in a negative direction in the medium to the long term; however as the regional economic strategies will influence the district short term trends are difficult to predict.

3.4 Enterprise and Innovation

3.4.1 Relationship with other Plans and Programmes

See relevant section under "Economic Activity".

3.4.2 Baseline Information

The number of VAT registered businesses in Hertfordshire increased every year from 1996 to 2003. In 2003, less than 1% of all businesses were large (over 200 employees); the majority were micro (1-10 employees); the largest number was in banking, finance and insurance.

Of all businesses based in Hertfordshire, 13.7% were located in Dacorum. In 2001, there was a 0.7% increase in VAT registered businesses within Dacorum, however, this dropped by 0.3% in 2002, and fell slightly again in 2003.

A new economic development group 'Hertfordshire Works' has been set up to promote the area and drive forward economic development objectives. Its vision is: *'By 2021, Hertfordshire will have a resilient and low carbon economy characterised by quality jobs, innovative and dynamic business, supported by a well skilled workforce and an entrepreneurial culture, where everyone has the opportunity to prosper and fulfil their ambitions'*.

The five key economic objectives are:-

- Creating a vibrant, low carbon economy
- Stimulating enterprise, innovation and inward investment
- Developing a well skilled workforce for the future
- Providing quality locations and infrastructure
- Creating vibrant towns, vibrant communities

3.4.3 Trends

There has been no clear trend in the number of VAT registered business in the areas.

References

Air Quality Archive, available at <http://www.airquality.co.uk/archive/laqm/laqm.php>

APIS, available as http://www.apis.ac.uk/overview/regulations/overview_UK_NAQS.htm

Borough of Dacorum (1999) "Dacorum Borough Nature Conservation Strategy", available at <http://www.ukbap.org.uk/lbap.aspx?ID=371>

Campaign to Protect Rural England (2003) "Night Blight! Report"

Campaign to Protect Rural England (2005) "Mapping Tranquillity - Defining and assessing a valuable resource"

Cheeseman, K. and Phillips, P. (2001), "The Northamptonshire Resource Efficiency Project: The exit strategy", Resources, Conservation and Recycling, 32, 203-226.

Cooper, J. (2001) "Waste: striving for a more sustainable future, Local Environment", 6 (2), 109-111

Countryside Agency (2000) "Character Northern Thames Basin", available at

Countryside Agency (2000) "Landscape Character Areas in the South East and London "

Dacorum DC "Sport Centres", available at <http://www.dacorum.gov.uk/about/sportscentres.aspx>

DEFRA (2005) "Home Energy Conservation Act 1995",

EA (2005) "High Level Target 12: Development & Flood Risk 2003/04"

English Heritage (2004) "Heritage Counts 2004 - The State of England's Historic Environment", available at <http://www.english-heritage.org.uk/heritagecounts/>

English Heritage (2005) "Buildings At Risk Search" <http://www.englishheritage.org.uk/server/show/nav.1426>

English Nature (1997) "Chilterns Natural Area",

English Nature (1997) "London Basin Natural Area"

English Nature (2005) "Local Nature Reserves",

Environment Agency (2004) "The State of Soils in England and Wales",

EU (2001) "Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment", available http://europa.eu.int/comm/environment/eia/fulllegal-text/0142_en.pdf

Forestry Commission (2002) "National Inventory of Woodland and Tress - County Report Hertfordshire", available at [http://www.forestry.gov.uk/pdf/hertfordshire.pdf/\\$FILE/hertfordshire.pdf](http://www.forestry.gov.uk/pdf/hertfordshire.pdf/$FILE/hertfordshire.pdf)

Harman, J, Gawith, M. and Colley, M. (2005) "Progress on assessing climate impacts through the UK Climate Impacts Programme", *Weather*, 60 (9), 258-262.

Hertfordshire County Council "Sport and Leisure Centres", available at <http://www.hertsdirect.org/comdirectory/comvol/sport2y/spcent3y/>

Hertfordshire Environmental Forum (2004) "Quality of Life Report 2004"

Hertfordshire Environmental Forum and Herts and Middlesex Wilrust (1998) "A 50 Year Vision for the Wildlife and Natural Habitats of Hertfordshire", available at <http://www.ukbap.org.uk/lbap.aspx?id=374>

Hertfordshire Prosperity Local Economy Assessment (2004)

Herts Link (2004) "Quality of Life Indicators", available at <http://www.hertslink.org/portal/Observatory/Data%20by%20Subject/Life%20in%20the%20community/Quality%20of%20Life/Quality%20of%20Life%20Indicators>

Hertslink "Infant Mortality", available at <http://www.hertslink.org/portal/Observatory/Data%20by%20Subject/Life%20in%20the%20community/Quality%20of%20Life/Quality%20of%20Life%20Indicators/QoL11%20Infant%20Mortality.xls>

Levett-Therivel and LUC (2004) "East of England Plan - SA Report", available at <http://www.go-east.gov.uk/goeast/publications/>

Levett-Therivel and LUC (2004) "Sustainability Appraisal of the East of England Plan", available at <http://www.eera.gov.uk/category.asp?cat=120&id=SXE12B-A77F5420>

National Statistics -

Netcen (2003) "Local and Regional Estimates of Carbon Emissions 2003 (excludes aviation, offshore, shipping)",

NHS "Hertfordshire Age Profile",

ODPM "Local Authorities' Best Value Performance Indicator"

ODPM (2005) "Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents", available at <http://www.odpm.gov.uk/>

ONS "Neighbourhood Statistics",

ONS (2003) "Regional Quality of Life Counts",

ONS "Census 2001". Regional Quality of Life Counts

Three Rivers DC "Leisure and Culture", available at <http://www.threerivers.gov.uk/Default.aspx/Web/LeisureandCulture>

Watford BC (2003) "Watford District Plan 2000", available at

Williams, P. (2005). "Waste Treatment and Disposal", Second edition, John Wiley and Sons Ltd, Chichester, 380pp.